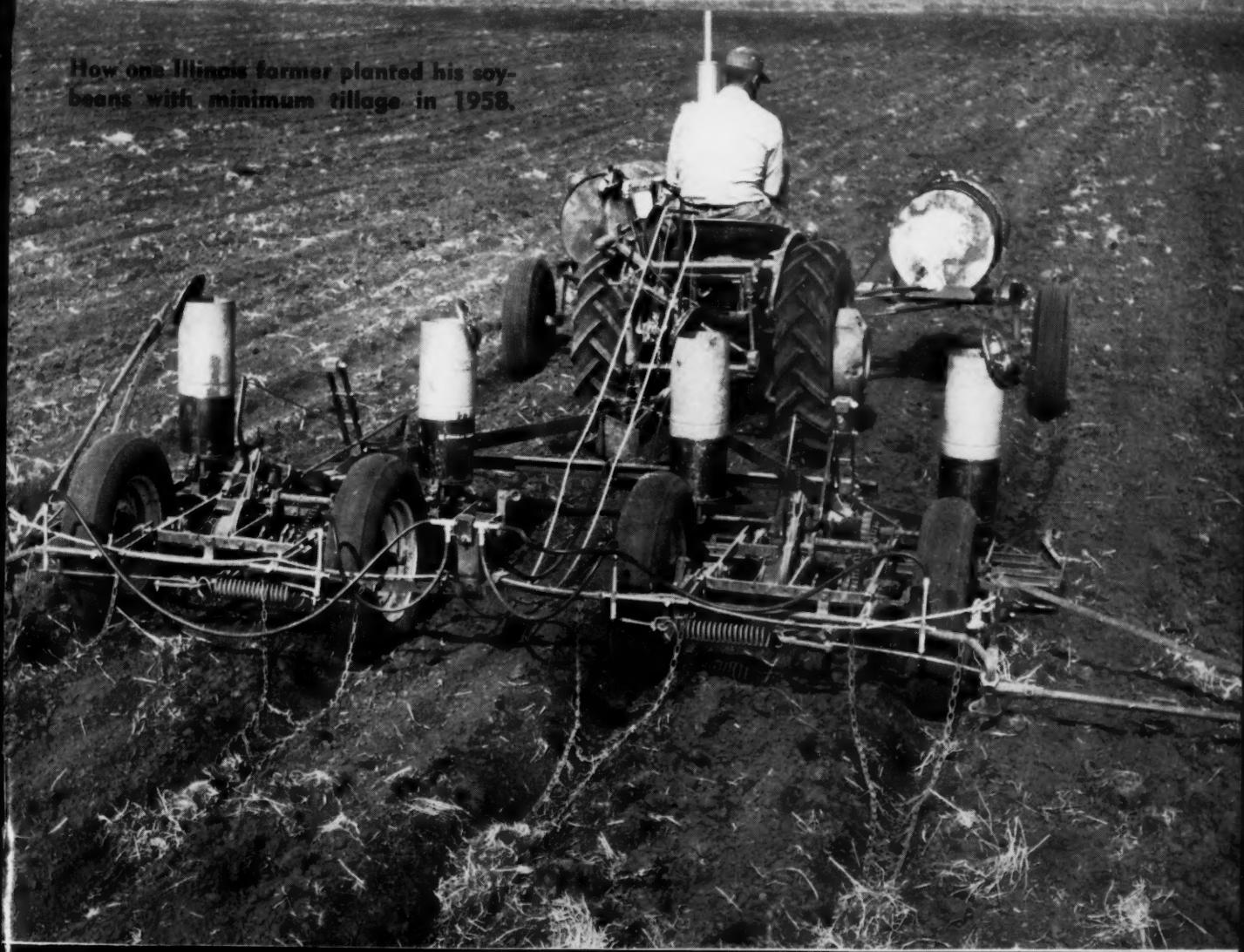


THE

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THE SOYBEAN DIGEST

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Objectives of the American Soybean Association include the bringing together of all persons interested in the production, distribution and utilization of soybeans; the collection and dissemination of the best available information relating to both the practical and scientific phases of the problems of increased yields coupled with lessened costs; the safeguarding of production against diseases and insect pests; the promotion of the development of new varieties; the encouragement of the interest of federal and state governments and experiment stations; and the rendering of all possible services to the members of the Association.

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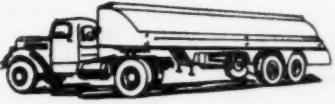
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GUEST EDITORIAL..... By ERSEL WALLEY

FILLING IN FOR GEORGE

This is the first time in the history of the Digest—18 years and 5 months—that this page has not in whole or in part reflected the writing genius of George Strayer. Whether his illness stems from long continued overwork or a "bug" picked up somewhere around the world does not matter. He was stricken while on duty in the "service of soybeans."

The entire ASA staff has risen to the emergency in carrying on during his illness. The rest of us accept certain assignments. This we do humbly but cheerfully. My job here is not to fill George's place but to fill "his page."

THE SIZE OF 1959 SOYBEAN CROP

This is "open season" for speculation on the size of the soybean crop this year. Grower intentions have not been declared. Even then, soybean acreage is finally determined to some extent by late weather conditions and the decision of farmers of what to put in "that odd field" and whether to plow under unneeded grass or leave it stand.

Other crops, particularly corn and cotton compete with soybeans for land utilization. The 1959 governmental programs favor increased cotton and corn acreage. Many think that this will be at the expense of soybean acreage.

Ideas on the price support level for 1959 soybeans have varied. On one side, there were those who favored no price support at all but were willing to compromise at \$1.65 per bushel. On the other extreme, there were those who argued that the price support on soybeans should be twice as much per bushel as the support price on corn in order to encourage soybean acreage. At \$1.85, increased production is certainly not encouraged.

Balancing off the exceptionally good yields of 1958 against the constantly improving cultural practices, we gaze into the crystal ball and come up with the prediction that with average weather the 1959 crop will likely be 5% to 10% smaller than the 1958 crop.

With the constantly increasing domestic and foreign demand for soybeans and soybean products it is important that sufficient production be maintained to meet the demands of the market.

PROTEIN IS THE THING

Protein is the number one feed and food need of the whole world. Here in the United States we have a constantly expanded use of soybean meal for our livestock and poultry industries. We have hardly

scratched the surface in developing the direct use of soybean proteins in foods in this country.

An increasing number of foreign countries are in the process of developing gigantic poultry and livestock enterprises. The ultimate success of these ventures depends on adequate supplies of protein concentrates, and American soybeans are the most logical and economical source of that supply. In those countries the potential need and demand is enormous.

More vital is the need of the many millions of undernourished people around the world whose advancement is tied to their ability to get proteins in their diet. American soybeans are the only real hope for these people. The entire current production of soybean proteins in the United States would not go far in partially supplying these vital needs.

All this suggests the demand for more soybean proteins in relation to soybean oil is mounting. If our consumers want more proteins we should supply that need. If it means new varieties (and it likely does) let us grow them. American soybean growers have been the leaders in supplying the needs of the changing times. Let us not lose that leadership.

SOYBEAN OIL PRICE AND VALUE

We do not go along with those who contend that with the superabundance of fats and oils on the market soybean oil must be made available at 8¢ a pound. It is not that simple. Those who have not used soybean oil and do not appreciate its merits may not be willing to buy it at any price.

Edible oils seem ridiculously cheap when they may be purchased at one-half the price per pound paid for lubricating oils. The petroleum industry merchandises its products. We producers of soybean oil have been too much inclined just to "dump our product on the market."

The world needs enormous supplies of fats and oils. Soybean oil can be made to meet many of those needs. It requires technical assistance and sales service to acquaint users with the merits and superiority of soybean oil.

Soybean oil can be sold for value and that value is more than 8¢ per pound. We have under way a merchandising job which has been long neglected. Once the job is properly done and then only will the true value of soybean oil be recognized.

Mr. Walley, who recently made a trip around the world in behalf of U. S. soybean markets, kindly consented to write this page this month while Editor Strayer is ill. He is ASA past president and chairman of the market development committee.

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The Soybean Digest is privileged to carry three very unusual articles on weed control in soybeans, based on Purdue University, Iowa State College and University of Missouri investigations. Two of the articles follow. The third will appear in April.

How Much Cultivation For Best Soybean Results?

By A. H. PROBST and O. W. LUETKEMEIER¹

ALTHOUGH chemical weed control is becoming more important in soybean production, you should not forget that a good weed control job can be done and yields increased with the equipment you have on your farm. Dependable chemical control of weeds in soybeans is lacking generally except for the control of grasses.

Your rotary hoe and shovel culti-

vator are important tools to control weeds and help increase soybean profits. Use them right and the profits are yours. That's what we found at Purdue University when we studied the effectiveness of the rotary hoe and shovel cultivator over a 3-year period.

We planted 45 to 50 pounds per acre of Harosoy soybeans in rows 40 inches apart and also 110 to 120

pounds per acre solid (7-inch drill rows) on plowed and well-prepared, good, dark-colored soil at Lafayette, Ind. This is good soybean soil, and like most good soils it is weedy. We planted June 1 in 1955, May 18 in 1956, and June 5 in 1957, about the same time our neighbors planted. Our treatments were replicated four times in plots about 300 feet long and four rows wide in the row experiment and 12 feet wide in the solid-seeded experiment. With plots of this size we were able to rotary hoe, cultivate, and combine at speeds and under conditions like you do on your farm.

We left some plots uncultivated, some we rotary hoed only, others we hoed and shovel cultivated, and in one case we even hand weeded in addition to hoeing and cultivating. The treatments we used and the results we obtained are shown in Tables 1 and 2. In each year we had a good soil-moisture supply at planting, and rainfall was generally abundant and timely through August. September was usually hot and somewhat dry. In each year we rotary hoed and cultivated when we considered it most timely to do a good job for best weed control.

In 1955 the predominant weed was barnyard grass, which was very abundant. In 1956 and 1957 we were bothered most with smart weeds, ragweeds, pigweeds, and panic grass (Figures 1, 2 and 3).

In 1956 and 1957 we harvested all the weeds from several areas in all plots to determine how many weeds

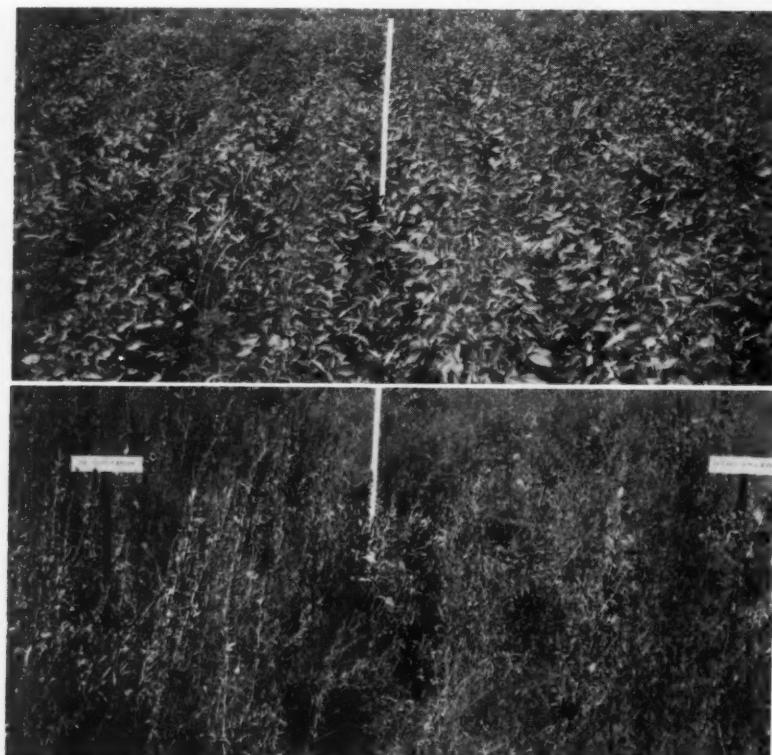


Figure 1. Weed growth in Harosoy soybeans, Lafayette, Ind., 1956. Top photo July 27, bottom photo Sept. 14.

Left

No cultivation
4,006 lbs. dried weeds/A. 2-yr. av.
26.4 bu./A (3-yr. av.)

Right

Rotary hoed 2 times
3,067 lbs. dried weeds/A. (2-yr. av.)
31.7 bu./A. (3-yr. av.)

¹ Research agronomist, crops research division, Agricultural Research Service, U. S. Department of Agriculture and associate professor of agronomy, Purdue University; and superintendent of Agronomy farm, Purdue University, respectively. Publication No. 323 of the U. S. Regional Soybean Laboratory. This study was supported in part by a grant-in-aid from the National Soybean Processors Association.

we had in our soybeans. We were surprised to learn that we grew over 2 tons (4,006 pounds) of dried weeds per acre in our 40-inch-row uncultivated soybeans. Even with so many weeds we averaged over 26 bushels of beans per acre. This was, however, over 10 bushels per acre less than in the area where we had very few weeds. We don't like weeds, but weedy beans are certainly worth harvesting.

In 40-inch rows, highest yields and No. 2 market grade soybeans were obtained when the beans were rotary hoed twice and shovel cultivated twice (Table 1). These beans had only 332 pounds of dried weeds per acre, and most farmers would call them "clean." Additional rotary hoeing, cultivating, or hand weeding had essentially no effect on yield but did produce No. 1 soybeans.

With one rotary hoeing and one shovel cultivation we averaged only 1.4 bushels per acre less than for two rotary hoeings and two shovel cultivations, but we had almost three times as many weeds (949 pounds per acre) and the beans graded No. 3.

The rotary hoe is very effective in reducing weed populations, but it cannot do the entire job of producing maximum yield. We dropped from 3,067 pounds of weeds per acre with two hoeings to 2,362 pounds when we hoed three times (Figures 1 and 2). When we used the rotary hoe only, we produced No. 4 beans.

Table 1. The effect of cultural weed control on the yield of dried weeds, percentage of foreign material in the grain, market grade, and yield of Harosoy soybeans grown in 40-inch rows at Lafayette, Ind., 1955-1957.

| Treatment | Foreign | | | | Yield | | |
|---------------------------------|---------|--------|--------|--------|-------|-----|--------|
| | Yield | ma- | Mar- | Yield | | | |
| weeds* | grain | terial | ket | lb./A. | % | no. | bu./A. |
| No cultivation | 4,006 | 5.6 | Sample | 26.4 | | | |
| Rotary hoed 2 times | 3,067 | 3.8 | 4 | 31.7 | | | |
| Rotary hoed 3 times | 2,362 | 3.5 | 4 | 32.4 | | | |
| Rotary hoed 1 time | | | | | | | |
| + 1 cultivation | 949 | 2.2 | 3 | 35.5 | | | |
| Rotary hoed 2 times | | | | | | | |
| + 2 cultivations | 332 | 1.1 | 2 | 36.9 | | | |
| Rotary hoed 3 times | | | | | | | |
| + 3 cultivations | 347 | 0.8 | 1 | 36.2 | | | |
| Rotary hoed 2 times | | | | | | | |
| + 2 cultivations | | | | | | | |
| + hand weeding | 133 | 0.5 | 1 | 36.1 | | | |
| * Two-year data, 1956 and 1957. | | | | | | | |

Table 2. The effect of cultural weed control on the yield of dried weeds, percentage of foreign material in the grain, market grade and yield of Harosoy soybeans seeded solid (7-inch drills) at Lafayette, Ind., 1955-1957.

| Treatment | Foreign | | | | Yield | | |
|---------------------------------|---------|--------|------|--------|-------|-----|--------|
| | Yield | ma- | Mar- | Yield | | | |
| weeds* | grain | terial | ket | lb./A. | % | no. | bu./A. |
| No cultivation | 445 | 1.4 | 2 | 36.3 | | | |
| Rotary hoed 1 time | 292 | 1.0 | 1 | 37.6 | | | |
| Rotary hoed 2 times | 406 | 1.1 | 2 | 37.1 | | | |
| Rotary hoed 3 times | 268 | 1.0 | 1 | 36.8 | | | |
| * Two-year data, 1956 and 1957. | | | | | | | |



Figure 2. Weed growth in Harosoy soybeans, Lafayette, Ind., 1956. Top photo July 27, bottom photo Sept. 14.

Left

Rotary hoed 3 times
2,362 lbs. dried weeds/A. (2-yr. av.)
32.4 bu./A. (3-yr. av.)

Right

Rotary hoed 1 time cultivated 1 time
949 lbs. dried weeds/A. (2-yr. av.)
35.5 bu./A. (3-yr. av.)

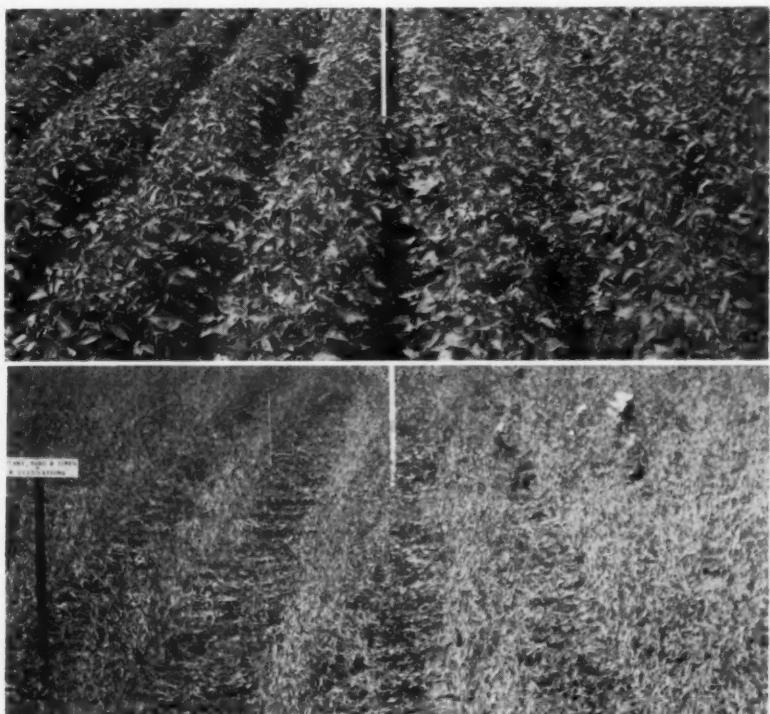


Figure 3. Weed growth in Harosoy soybeans, Lafayette, Ind., 1956. Top photo July 27, bottom photo Sept. 14.

Left

Rotary hoed 2 times
Cultivated 2 times
332 lbs. dried weeds/A. (2-yr. av.)
36.9 bu./A. (3-yr. av.)

Right

Rotary hoed 3 times
Cultivated 3 times
347 lbs. dried weeds/A. (2-yr. av.)
36.2 bu./A. (3-yr. av.)

Our yields were 3 to 5 bushels lower with hoeing only than when we added one or two shovel cultivations to our culture.

In our solid-seeded soybeans (Table 2) rotary hoeing had little effect in reducing weed population or in increasing yield in 1956 or 1957. Weeds were not abundant in these years as you will note in Table 2. In 1955 barnyard grass was especially bad, and we had a lot of it whether we hoed or not. With a single hoeing in 1955 yields were increased from 26.8 to 30.3 bushels per acre. The grade was raised also from No. 3 to 2.

To sum it up, we believe the best culture of row beans is two timely rotary hoeings plus two shovel cultivations. This treatment should give the most economical returns under most conditions and should keep weed populations near a minimum. Stage of weed and bean growth, and soil and weather conditions should govern when you do these jobs. With two hoeings and two shovel cultivations we hoed about 16 and 22 days after planting and cultivated about 27 and 39 days after planting during the 3-year study.

In solid seeding a single timely rotary hoeing should generally give most economical returns.

When beans become crusted during emergence, the rotary hoe should be used to break the crust to aid emergence even if this is not timely for weed control.

Cargill Buys Site For Grain Exports

PURCHASE of land at Toledo, Ohio, for construction of a grain export elevator has been announced jointly by Cargill, Inc., grain handling and processing firm headquartered in Minneapolis, and the Toledo Port Authority.

Owned formerly by the New York Central and Wabash railroads, the land fronts on the Maumee River 6 miles from Lake Erie in the Middle-grounds area.

The company said details and date of construction will be developed in cooperation with the railroads and the Port Authority.

The area was selected, Cargill said, because of its accessibility to rail and truck traffic as well as to lake vessels and seagoing freighters via the Maumee's proposed 27-foot channel that will accommodate any vessel capable of passing through the Seaway.

Cultural Treatments and Control in Soybeans

By E. J. PETERS,
D. L. KLINGMAN
and R. E. LARSON¹

THERE is little scientific information available on the use of the rotary hoe or on the number of shovel cultivations necessary for good weed control in soybeans. The introduction of herbicides for weed control in soybeans has added another set of factors that needs evaluation.

Weed control research at the University of Missouri has been aimed at finding answers to the following question: How many and what kind of tillage operations are necessary for good weed control in soybeans? To supply an answer to this question, we conducted one experiment with soybeans planted in 40-inch rows and another with soybeans drilled in 8-inch rows. The experiment on soybeans planted in 40-inch rows was designed to compare the effects of two cultivations, three cultivations and five rotary hoe treatments each followed by shovel cultivations (Table 1).

The "timely" treatment listed in the tables indicates that the soybeans were rotary hoed when the weeds were just emerging and were less than $\frac{1}{4}$ -inch high. "Late" means that the weeds were over $\frac{1}{4}$ -inch high and

¹ Research agronomists, crops research division and agricultural engineer, agricultural engineering research division, Agricultural Research Service, U. S. Department of Agriculture cooperating with the Missouri Agricultural Experiment Station.

"wet" means that the rotary hoeing was done right after a rain, just as soon as the soil would hold the tractor and mud would not ball up on the rotary hoe. The rotary hoe was operated at a speed of 4 to 5 miles per hour.

Besides evaluating these cultural treatments alone, we evaluated them under conditions where all weeds were removed by hand. Hand weeding reduced the effects of the weed-competition variable so that we were able to determine whether any appreciable injury had occurred from cultural treatments. A third evaluation was made by spraying pre-emergence with 20 pounds per acre of PCP (sodium pentachlorophenate) before cultivation or rotary hoe treatments. The experiment was laid out in a split-plot design with cultural treatments as main plots. It was replicated three times.

The soil selected for this experiment was a Mexico silt loam heavily infested with weeds that generally yielded in excess of 4,000 pounds of weeds on a dry-weight basis during the seasons of these experiments.

Use of PCP

The data in Table 1 show that where no additional treatment was used, three cultivations controlled weeds better and resulted in higher yields of soybeans than two cultivations. The use of PCP and cultivations nearly eliminated weeds and resulted in yields of about 2 bushels

Table 1. Yields per acre of soybeans and weeds due to various cultural treatments alone and in combination with hand-weeding and herbicide treatments. Average of 1956 and 1957 from soybeans planted in 40-inch rows.

| Cultural treatments | Average yields of soybeans | | | Average yields of weeds | | |
|---|---------------------------------|----------------------|--------------------------|--------------------------------|---------------------|------------|
| | No additional treatment bushels | Hand weeding bushels | PCP ¹ bushels | No additional treatment pounds | Hand weeding pounds | PCP pounds |
| 2 cultivations | 30.9 | 38.4 | 36.3 | 2,472 | 39 | 137 |
| 3 cultivations | 34.1 | 38.5 | 36.3 | 1,303 | 30 | 15 |
| 2 rotary hoeings (timely) plus 2 cultivations | 34.0 | 35.7 | 35.0 | 1,619 | 23 | 537 |
| 2 rotary hoeings (wet, timely) plus 2 cultivations | 32.7 | 36.4 | 35.0 | 1,945 | 12 | 27 |
| 1 rotary hoeing (wet, timely) plus 2 cultivations | 34.2 | 37.9 | 36.7 | 1,644 | 25 | 232 |
| 1 rotary hoeing (late) plus 2 cultivations | 28.2 | 34.4 | 36.0 | 3,157 | 48 | 266 |
| 3 or 4 rotary hoeings (timely) until the soybeans were 8 inches tall plus 1 cultivation | 25.6 | 37.7 | 35.6 | 4,233 | 18 | 290 |

¹ PCP was the sodium salt of pentachlorophenate used at the rate of 20 pounds per acre.

and Herbicides for Weed

per acre less soybeans than the hand-weeded plots and 2 to 5 bushels more than plots receiving no additional treatment. Two cultivations were equal to three cultivations when PCP was used. Where no additional treatment was used, rotary hoeing followed by two cultivations did not improve yields over three cultivations alone. Hand weeding and PCP tended to eliminate differences in yields due to cultural treatments. In the no-additional-treatment columns of Table 1, there is evidence that rotary hoeing when the soil is wet can reduce weeds and increase soybean yields.

The findings show that it may be profitable to rotary hoe when the soil is wet rather than delay this operation and run the risk of allowing the weeds to become too big. The data indicate that one "wet, timely" rotary hoeing plus two cultivations removed more weeds and increased soybean yields more than one "late" rotary hoeing plus two cultivations.

A somewhat similar experiment was done on soybeans drilled in 8-inch rows. Timely, late, and wet rotary hoe treatments were applied in the same manner as those given to soybeans planted in 40-inch rows (Table 2). These treatments were applied alone and in combination with CDAA (Randox) or PCP. The soil type, weed infestation, experimental design and speed of the rotary hoe were similar to those in the row experiment.

Where no additional treatment was used, rotary hoeing reduced the amount of weeds and increased yields. Again, "timely" was better than "late" rotary hoeing and rotary hoeing under wet conditions was equal to the practice under dry conditions.

Weed yields were reduced and soybean yields increased where herbicides were used as compared with rotary hoeing alone or with no treatment; however, some increase in yield of soybeans resulted from timely rotary hoeing in addition to the herbicide treatments.

The additional benefits from hoeing were somewhat more pronounced where CDAA was used than where PCP was used. The difference was probably due to the rotary hoe removing broad-leaved weeds that were not controlled by CDAA. The better yields from use of PCP as compared with CDAA were probably due to the better control of broad-leaved weeds by PCP.

The question of how many and what kind of tillage operations are necessary for good weed control in soybeans has been answered in our experiments.

Shovel Cultivating

Our data indicate that a careful job of shovel cultivating that throws the soil into the row and covers small weeds is as effective for reducing weeds and increasing soybean yields as rotary hoeing. Three cultivations are about equal to rotary hoeing followed by two cultivations. Although the benefits of cultivating and rotary hoeing are about equal when soybeans are small, rotary hoeing has some advantage. Cultivating small soybeans is a slow, painstaking job while rotary hoeing can be done rapidly and thus save valuable time.

In our experiments, herbicides have generally increased the yields of soybeans over yields obtained by tillage alone. When considering the use of herbicides it should be kept in mind that the best herbicides now

available will control weeds for about 4 to 6 weeks, but that sometimes weed control is erratic.

The herbicides presently available for soybeans vary in the type of weeds that they will control. CDAA generally controls annual grass weeds better than broad-leaved weeds. PCP controls both annual grass and broad-leaved weeds.

Under Missouri conditions, CDAA and PCP* are the only herbicides considered safe for use on soybeans, but these herbicides leave something to be desired for all-season weed control. All other herbicides extensively tested have injured soybeans or given poor weed control.

Herbicides generally delay the first cultivation and permit the farmer to omit one cultivation. Cost of herbicides is moderately high and the grower should carefully consider the following points:

1—Will the anticipated increase in yield due to the use of a herbicide pay for the cost of purchasing and applying it?

2—If I can omit one cultivation how much is that worth to me? (Perhaps not only the cost of applying the cultivation should be considered here, but the value of being able to spend time on other important work during the busy season should also be taken into account. The extra work involved in applying the herbicide also has to be taken into consideration.)

3—How much is the reduction of weeds at harvest time worth in decreasing wear on machinery and raising the quality of soybeans?

4—How much time is saved in harvesting clean soybeans rather than weedy ones?

5—How many soybeans are lost in harvesting weedy soybeans?

None of the questions listed have been completely answered by research. Many of them can best be answered by the grower who has used herbicides. It is our judgment that at the present costs it will be profitable to use herbicides when land is severely infested with annual weeds and in areas where timely cultivation often may be difficult.

Table 2. Yields per acre of soybeans and weeds due to various cultural treatments alone and in combination with herbicide treatments. Average of 1956 and 1957 from soybeans planted solid stands.

| Cultural treatments | Average yields of soybeans | | | Average yield of weeds | | |
|--|---------------------------------|---------------------------|--------------------------|--------------------------------|-------------|------------|
| | No additional treatment bushels | CDAA ¹ bushels | PCP ² bushels | No additional treatment pounds | CDAA pounds | PCP pounds |
| No treatment | 16.4 | 24.0 | 26.3 | 3,176 | 1,902 | 750 |
| Rotary hoeing (timely) | 21.4 | 26.7 | 28.2 | 2,201 | 733 | 476 |
| Rotary hoeing (late) | 19.7 | 21.0 | 26.8 | 2,731 | 1,702 | 754 |
| Rotary hoeing (timely, wet) | 22.2 | 28.0 | 26.8 | 2,683 | 566 | 569 |
| Rotary hoeing (timely until soybeans were 8 inches tall) | 22.3 | 25.6 | 27.1 | 2,165 | 404 | 419 |

¹ CDAA (2-chloro-N,N-diallylacetamide) sold commercially as Randox was used at the rate of 4 pounds per acre. The yield information for CDAA is from 1957 only. ² PCP refers to sodium pentachlorophenol used at the rate of 20 pounds per acre.

*PCP at the present time has not been cleared for use on soybeans as required by Public Law 518.



THESE SOYBEANS planted with minimum tillage on one Illinois farm looked like this, even before cultivation. Keeping a fine seedbed in the row assures a good stand of the crop, and a rough seedbed in between makes it hard for the weeds to get a start.

Many Illinois Fields Are Worked More Than Needed

RECENT SUMMARY of 2-year average corn and soybean yields on experimental minimum-tillage plots indicate that most Illinois farmers do not need to work their fields as much as they do to get high yields.

J. W. Pendleton and P. E. Johnson, University of Illinois extension agronomists, report that minimum-tillage trials at the DeKalb, Urbana

and Brownstown experiment fields show that preparing a good seedbed in the row area rather than on the entire field should be the main concern.

Trials at the three experiment fields compared conventional seedbed preparation with plowing and planting in the track of an automobile wheel mounted on the planter frame and plowing, harrowing and planting. Each of the fields used the same tillage treatments on both corn and soybeans.

Two-year soybean yield averages show that minimum-tillage practices are successful on soybeans as well as on corn. At the Brownstown field, soybeans averaged 33.2 bushels on a conventional seedbed and 35.3 bushels in plow-plant trials.

Research indicates that it may be necessary to use a device of some kind to control soybean planting depth in plow-plant operations, since irregular planting depth is more critical in soybeans than in corn.

The agronomists point out that use of minimum-tillage practices adds to considerable savings in cost per bushel of grain. Each reduction in trips over the field cuts about \$1 an acre from production costs. Fewer trips also mean less soil compaction, better weed control and less soil erosion.

THE COVER PICTURE

How One Illinois Farmer Planted Beans

THE COVER PICTURE shows how one Illinois farmer planted his soybeans with minimum tillage in 1958. Front tractor wheels were extended to carry the barrels of Randox. The pre-emergence spray made only one cultivation necessary. Chains dragging behind the sprayed area helped make weed chemicals more effective.

The cover photo, and also the one at left, are courtesy the University of Illinois.

Committee Says More Weed Research Needed

WEED CONTROL research is a pressing need to achieve efficient production of soybeans and other oilseed crops, according to the U. S. Department of Agriculture's oilseeds and peanut research and marketing advisory committee. The committee held its annual meeting at New Orleans.

Basic and applied research should be done, according to committee members, on weed-crop relationships involving pre-emergence chemical treatments; to develop the best herbicide rotation; and to develop the best uses of herbicides in combination with cultural, crop rotation, and biological control methods.

Basic studies of soybean and peanut physiology also rated a high priority from the committee. An understanding of the physiological reasons for the failure of soybeans to respond to direct applications of fertilizer in some growing areas might be reached by such research.

The committee also noted a need for studying the potential world consumption of oils and fats with the aim of extending the foreign market for U. S. oilseed production.

In the area of utilization research, the committee gave its highest priority to a proposal to develop various industrial products from soybean and linseed oils. Also important is research to improve methods of vegetable oil fractionation and analysis.

Committee members who attended included: Otto G. Brandau, soybean producer, Rudd, Iowa; John W. Evans, soybean and flaxseed producer, Montevideo, Minn.; A. C. Hoehne, vice president, Archer-Daniels-Midland Co., Minneapolis; Dorsey Kirk, master of Illinois State Grange and soybean producer, Oblong, Ill.; and Joseph R. Smith, secretary, Pacific Vegetable Oil Corp., San Francisco, Calif.

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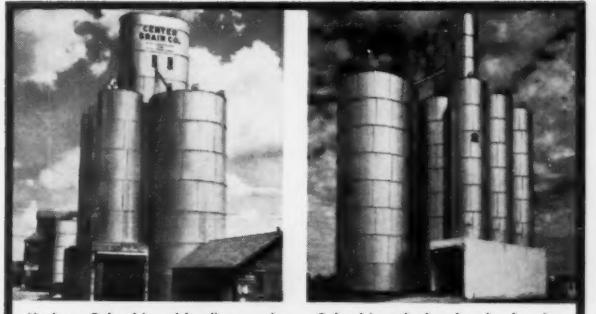
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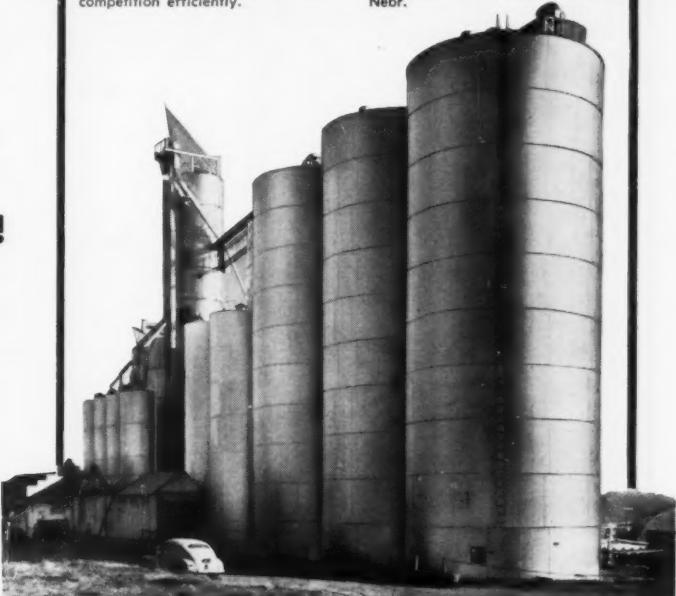
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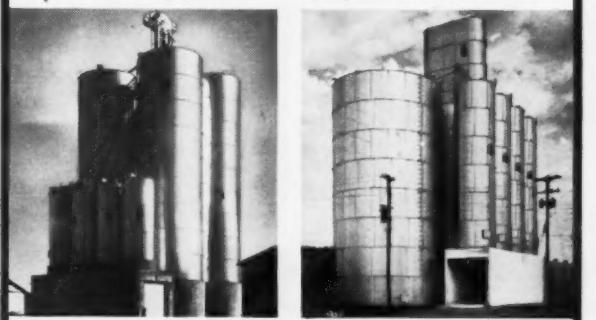


Modern Columbian blending and classifying tanks and a new headhouse, added to a part-new, part-old elevator at Oberlin, Kans., enable Center Grain Co. to meet competition efficiently.

Columbian look ahead planning and bolted steel tanks provided this completely modern 115,000 bu. "all gravity" elevator for Burlington Elevator Co. at Hebron, Nebr.



This 250,000 bu. Lafayette Mill & Elevator at Lexington, Mo., started as a modern 75,000 bu. plant designed with Columbian "look-ahead" engineering in 1946. The extra "dollar capacity" of that efficient original installation created enough business to require and permit expansion to its present size within ten years.



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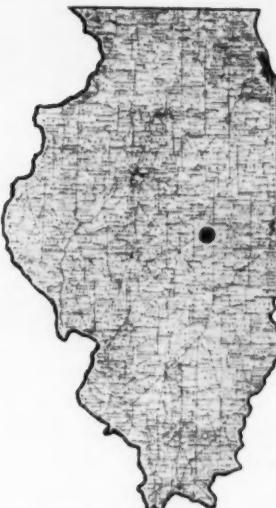
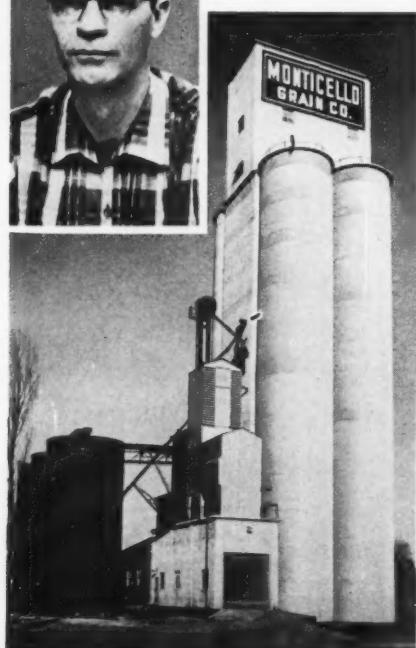
Columbian Modernization provided so much extra "dollar capacity" for Riverville Grain Company's 64,000 bushel elevator that a 67% expansion of bushel capacity became necessary within one year. New Bolted Steel tanks for 43,000 bu. were added.

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Monticello Grain Co., Monticello, Illinois



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THE NEWS IN BRIEF

THE CROP, MARKETS AND OTHER ITEMS OF NOTE

Look for 1959 Acreage To Be Down

General opinion is that the support of \$1.85 on 1959-crop soybeans announced Feb. 18 by the U. S. Department of Agriculture, coupled with the more favorable support for corn, will cost soybeans some acres this spring. Figure most frequently mentioned is a drop of 5% to 10% in main northern soybean states. One processor believes acreage may be down as much as 15% in central Illinois.

Members of the board of directors of the American Soybean Association meeting in Chicago the last week in February said in their opinion acreage would have gone down some even with a higher support but there will be a larger cut under the \$1.85 price. ASA representatives had recommended a price of \$1.96 to USDA. (See Ersel Walley's comment on page 4.)

The Des Moines (Iowa) Register quotes the opinions of farmers and seed corn growers to the effect that soybean acreage will be cut back considerably, and in some instances apprehension that there may be a shortage of soybean meal for protein supplements. The Register says some hybrid seed corn firms are reporting increased interest in corn with the conclusion that there will be a considerable increase in acreage planted to corn this year.

J. M. Ragsdale, University of Missouri extension economist, does not expect Missouri soybean production this year to reach the record 53 million bushels of last year due to probable greater planting of corn and cotton, and the likelihood that per-acre yields will not be as high as they were last year.

But there is still a strong sentiment for beans in many areas, regardless of the support level. Quoting Ohio Valley Soybean Cooperative, Henderson, Ky.: "We have discussed the 1959 crop with several of the farmers in our immediate area and their reactions indicate a keen interest in soybeans for their farms this year. We gather from them that if the market outlook is not too much changed at market time they will plant as many soybeans this year as last."

K. A. Standing, secretary-manager Ontario Soya-Bean Growers' Marketing Board, Chatham, says the outlook in southwestern Ontario is for a smaller soybean acreage in 1959 due to low yields in fringe areas last year.

Suggests Voluntary Cutback

Noting that U. S. soybean growers produced 574 million bushels of soybeans in 1958 while only 500 million bushels were needed, Daniel F. Rice & Co., Chicago, suggests a voluntary cutback of 15% in soybean acreage this year. This would return the price of beans to around the \$3 level, the firm suggests.

"Such a plan would require much organization and work but it would be well worth it in the long run. If the common laborer can raise his pay from \$5 to over \$15 a day then there is no reason why the farmer cannot control his production through cooperative efforts and thereby improve his position in the economy too," the firm states.

Export Program of ASA, Council

Joint export market development programs for soybeans and soybean products by the Soybean Council of America and USDA's Foreign Agricultural Service are now in the active planning stage for several new parts of the globe including Germany, Israel, the Caribbean and several South American countries—Bolivia, Peru, Chile and Colombia. Talks are going forward concerning similar market development projects for the Far East, which will be based on the work of the Council's survey team which visited the area last fall, if they are put into effect.

Council President Howard L. Roach and Edward M. James, the Coun-

cil's technical consultant, were in Washington conferring with FAS officials in late February.

The American Soybean Association's agreement with FAS covering the export market development project in Japan has been extended to Dec. 31. The agreement was to have expired Mar. 31.

David R. Farlow, assistant to ASA's executive vice president, is in Japan negotiating with the Japanese government and trade groups in that country for an extension of the export market development program for soybeans and soybean products in Japan through next Dec. 31. See page 00.

Barter Deal with Japan

Washington sources say a barter deal is in process in which 1.8 million bushels of Commodity Credit Corp.-held soybeans will be traded for Japanese ferromanganese. Purchase of the beans is being made by three Japanese firms, Daiichi Bussan, Mitsubishi, and Kinoshita.

Japanese trading firms have concluded a "provisional" contract for purchase of 50,000 metric tons of Soviet soybean meal, according to our information. The price is \$77 CIF per ton, with the first shipment scheduled for May. The move is being vigorously opposed by Japanese processing firms. And the Japanese Forestry-Ministry intimates it is not likely that the import of Soviet meal will be approved.

USDA on Feb. 13 announced an agreement with Turkey to finance sale of \$30.2 million worth of soybean or cottonseed oil. Purchase authorization for this amount was issued Feb. 24. Sales made between Mar. 3 and Aug. 31 will be eligible for financing, and shipments from U. S. ports must be made between Mar. 3 and Sept. 30.

F. P. Biggs, director of the New Orleans Commodity Stabilization Service office, announced the sale for export of 11 million pounds of government-owned crude cottonseed oil at 11.03¢ per pound in store at Houston, Tex., CSS's New Orleans office stated that its Jan. 30 announcement offering cottonseed oil for sale was being amended and would be reissued at an early date. Additional quantities of oil will be offered after the amendment becomes effective.

Note on the Meal Market

"During the October-December quarter, mills processed over 100 million bushels of soybeans for an alltime record," notes Fred Hafner, director of General Mills protein operations. "Then, in January mills broke all previous records by processing nearly 37 million bushels. This January urge in soybean oil meal production was ill-timed. One the 'break' began in late January, the market lost ground rapidly.

"Only one possibility remains which would change the present situation—a correction in the supply-demand balance of soybean oil meal. Should there be any curtailment in production . . . this could trigger a market recovery that could take meal prices on another price spiral."

There is no evidence to indicate that removal of the 3¢-per-pound processing tax on imported coconut oil has had any significant effect on U. S. consumption of the product which competes with U. S.-produced oils, says George A. Parks of Foreign Agricultural Service. Parks spoke before the National Institute of Oilseed Products at Oaji, Calif.

World production of fats and oils in 1959 is tentatively forecast at an alltime high of 31.4 million short tons, according to FAS. This would represent an increase of 4% from 1958 and a 3% increase from the previous record of 1957. The most significant increase will be in edible vegetable oils, which are expected to attain a record high of 12.4 million tons.

The 1959 edition of the Soybean Blue book, our soybean industry yearbook, will be mailed to you shortly.

A fairly good movement of farmer-held beans to elevators and processing plants in February was reported by our observers. These were coming from many areas and appeared to be a cleanup of beans that did not go under the loan.

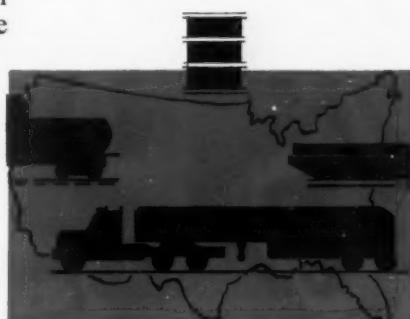
Germination tests of 1958-crop soybean seed are showing good results in all areas, our reports show.

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Pre-Emergence Chemicals For Soybeans in Illinois

By W. O. SCOTT

Associate Professor of crop extension,
University of Illinois

USE OF PRE-EMERGENCE chemicals in controlling weeds in soybeans is practical on Illinois farms. The outcome of pre-emergence applications, like the outcome of most other farm operations, depends largely on the weather.

Either too little or too much rain may bring disappointing results. Use of pre-emergence then becomes a factor in insuring against excessive weeds under most conditions.

The principle of insuring against adverse conditions so far as weed control is concerned is the same principle involved in building a good seedbed. Good seedbeds provide insurance against adverse conditions at the time the seeds are germinating and establishing themselves.

Two herbicides are available for pre-emergence control of weeds in soybeans. They are Randox and Alanap.

Randox is specific for annual grass weeds and seldom gives control of broad-leaf weeds. Randox is first choice where annual grasses are the predominant problem.

Alanap has not been used widely in the past, but its use is increasing. It gives good control of grass and will control most broad-leaf weeds with the exception of smartweed. Alanap occasionally injures soybeans, but in most cases the injury is temporary and is not measured in terms of yield reductions.

Pre-emergence herbicides for soybeans should be used only on fields where annual weeds are known to be serious. It takes about a 2-bushel increase in yield of soybeans to pay for a band treatment of herbicide. In seriously infected fields, the herbicide would have to be successful only once in 3 years to pay for the treatment, and the probability is that these treatments will work about 3 out of 4 years.

Dillon Wins Iowa Soybean Yield Contest



M. E. Dillon

M. E. DILLON of Keota, Iowa, was a double winner at the Iowa Crop Improvement Day at Ames Feb. 17.

He was first place winner of the Iowa Master Soybean Contest, with a yield of 51.45 bushels per acre. And he was also contour master corn grower, with a yield of 158.76 bushels per acre.

As winner of the soybean contest, Dillon received the John Sand Trophy given by Sand Seed Service, Marcus. His entry was sponsored by

the Sigourney Chamber of Commerce.

The contest field of 4 acres was in oats in 1957 and corn in 1955 and 1956. The field was spring plowed the first part of May, disked twice and harrowed before planting. The field was planted May 26 with Hawkeye soybeans in 31-inch rows at the rate of 1½ bushels per acre. The field was cultivated twice, and was combined Oct. 10 with a self propelled Massey-Harris combine on a dry day.

Second place winner was Jimmy Pierce, Minburn, with a yield of 50.59 bushels per acre. He received a silver plaque from Iowa Soya Co.

Third place winner was Kenneth Taylor, Indianola, with a yield of 48.17 bushels per acre.

Fox Wins 1958 Yield Contest in Delaware

ELWOOD T. FOX, JR., Bear, won the Delaware Crop Improvement Association soybean yield contest in 1958 with a yield of 51.8 bushels per acre and was crowned soybean king at the annual DCIA banquet.



Elwood T. Fox

Fox grew Clark soybeans, planting them May 30 in 38-inch rows at a rate of 90 pounds per acre. Preceding crop was corn. He used 200 pounds of 5-15-15 fertilizer per acre.

Other soybean contest winners:

Allen D. Figgs, Seaford, whose Dormans yielded 49 bushels per acre. He planted May 25, in 38-inch rows at the rate of 45 pounds per acre. No fertilizer was used. Preceding crop was wheat.

Joshua T. West, Bridgeville, 48.9 bushels per acre with a farmer selection. He planted May 20 in 36-inch rows at a rate of 40 pounds per acre. The crop followed small grain and West fertilized with 600 pounds of 0-20-20 per acre.

Wayne E. Hickman, Frankford, 47.3 bushels per acre with Ogden planted May 31 in 40-inch rows at a rate of 50 pounds per acre. The crop followed sod and no fertilizer was used.

Olin Gooden, Felton, 47 bushels with Clark planted June 10 in 40-inch rows at a rate of 50 pounds per acre. The crop followed corn and 200 pounds of 0-25-25 were used.

Ernest Council, Jr., 46.8 bushels with Clark planted May 30 in 40-inch rows. Preceding crop was soybeans. No fertilizer was used.

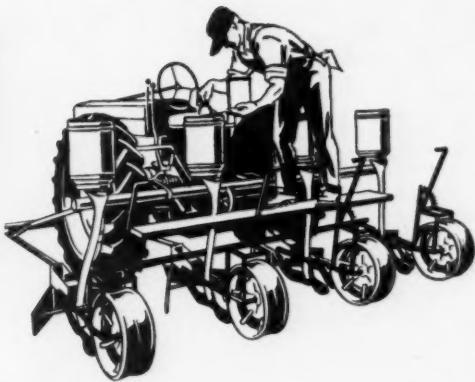
A total of 30 contestants had a yield of 40 bushels or more last year and made the 40-bushel club.

Twenty-five of the 30 used fertilizer. Eighteen grew the Clark variety, five Wabash, four Ogden, and one each Dorman, S-100 and a farmer selection.

Ten of the 40-bushel contestants planted in 40-inch rows, seven in 38-inch rows, five in 36-inch rows, three in 42-inch rows, two in 28-inch rows, and one each in 18-inch, 35-inch and 30-inch rows.

Planting dates varied from May 20 to June 18.

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Features of Tennessee
research are work with
the soybean nematode and
atomic energy.



MATURING PLANTS of the Dorman variety of soybeans—compare its earliness with that of the green variety in the background—are examined for differences in date of maturity and retention of seeds by T. S. Osborne, co-author of this article.

Soybean Research in Tennessee

By H. E. REED
Acting Head, Plant Pathology Department
and T. S. OSBORNE
Associate Plant Breeder, Botany Department
University of Tennessee

MANY DISEASES affect the soybean, but few have been more threatening to soybean production than the soybean cyst nematode, *Heterodera glycines*. Ways to stop it have been studied the past year by the University of Tennessee Agricultural Experiment Station at the Jackson, Tenn., substation, in cooperation with the U. S. Department of Agriculture.

This nematode was first found in the United States in a limited area in North Carolina in August 1954. Measures were immediately taken by both state and federal governments to prevent its spread from the infested area. In 1956, however, the soybean cyst nematode was found in Lake County, Tenn. The infested area was found to be quite extensive, and it now includes areas in the nearby states of Missouri, Arkansas, Mississippi, and Kentucky. The newly-infested area poses a threat to commercial production of soybeans.

What the Disease Does

Symptoms of the disease are a yellowing and stunting of plants and

lower yields. Severe infestations have often destroyed a farmer's entire crop.

The Unknown. Many problems arose as a result of the widespread infestation with the soybean cyst nematode in the commercial soybean growing area in 1956. Little was known about the life cycle of the nematode: how it might spread to other areas, different plant hosts on which it might live and reproduce, cultural methods to reduce or eliminate it from infested areas, effects of soil fumigation with different nematocides, and resistance or immunity of different soybean lines or varieties. As a result of this lack of information, the Tennessee station and the USDA began their intensive study of this pest at Jackson.

Many of these problems are under investigation, and some of the work has proved quite fruitful. Several new plant hosts have been found through inoculation studies in greenhouse tests. These include white lupine, hemp sesbania, and henbit deadnettle. Other hosts which were already known besides soybean include snapbean, vetch, annual lespedezza, wild soybean, and adzuki bean.

The larvae and eggs remain viable for a long period of time in the soil, but tests indicate they are killed by drying when they are stored with the seed for several months.

Breeding Resistance. Study results showed that several lines of soybeans have high resistance or immunity to the pest. On these lines the nematode is not able to reproduce, and as a result it dies out. Use of resistant soybean varieties appears to be one of the most promising means of control. These lines are being developed by breeding.

It now appears that a highly resistant or immune variety of soybean may be developed—one having commercial value—by using this source of resistance or immunity. If so, a big stride will have been made toward controlling the soybean cyst nematode.

Improvement by Radiation

Soybeans and Atomic Energy. University of Tennessee scientists, in cooperation with the Atomic Energy Commission at Oak Ridge, are in their second year of attempting to cause genetic changes or "mutations" in soybeans by using high-energy radiations of about 20,000 R, or roentgen units. Seeds of four varieties of soybeans—Ogden, Lee, Dorman, and Volstate—were exposed to gamma rays from cobalt-60 before they were seeded in 1957. Individual plants were harvested and threshed singly, and their seeds were sown in "progeny-rows" in 1958.

Any differences from the parent variety will be catalogued and studied, with emphasis on such important

features as earliness, resistance to the cyst nematode, and retention of seeds. Promising strains are being tested for nematode resistance in cooperation with personnel at the new USDA regional laboratory at Jackson. Also, field plantings are made

on plots of the U-T—AEC Agricultural Research Laboratory at Oak Ridge. Any desirable attributes found will be bred into an improved variety by standard breeding methods, then released to Tennessee farmers.

To Build Addition to Quincy Plant

THE CHEMICAL PLANTS division of Blaw-Knox Co., Pittsburgh, Pa., has been awarded a contract to design and construct an addition to the soybean processing plant of the Quincy Soybean Products Co., Quincy, Ill. The new facilities will increase the plant's capacity from 750 to 1,200 tons of soybeans a day.

The contract also calls for the procurement of all equipment which includes a Rotocel continuous solvent extraction system. The modernization of its facilities will provide Quincy Soybean Products with the most efficient and economical system available today for the processing of soybeans.

The Rotocel brings this high efficiency and economy to the process because of its application of varying strengths of solvent to continuously passing batches of soybean flakes. Essentially, the machine consists of a large rotor made up of 18 sector shaped cells having hinged screen doors for bottoms. The doors are normally kept closed by rollers riding on a supporting track. Above the rotor are mounted solvent spray heads and beneath it is a circular drainage pan divided into compartments. The entire mechanism is enclosed in a gas-tight housing.

A gas-tight screw conveyor mixes enough oil-solvent solution with the soybean flakes to form a slurry which it feeds to each cell as the rotor revolves. As the cells move around their circular path, they are flooded by successive washes of miscella (extracted oil and solvent) gradually approaching fresh solvent in composition. The last spray is of fresh solvent (hexane), after which the solids are permitted to drain by gravity before the door bottom trips and dumps them into an outgoing conveyor.

The arrangement of the drainage basin into stage compartments permits spraying the contents of each cell with relatively low-solvent concentration miscella at the start of its journey around the circular path, and progressively stronger doses until the spray of fresh full-strength solvent. Final solution leaving the

drainage compartment is filtered through a fresh cell of soybean flakes. From here it is pumped to the distillation system where the solvent and soybean oil are separated.

The Rotocel method of feeding solvent countercurrent to the travel of the soybean flakes, with closely preset drainage periods, produces the greatest quantity of oil per pound of soybeans, and assures a minimum amount of residual oil remaining in the spent solids.

Cargill Farm Reports

Improved Poult Formula

FEEDING TESTS at the Cargill, Inc., research farm at Elk River, Minn., have shown that dehulled soybean oil meal—a low-fiber, 50% protein feed—can produce markedly better gains in turkey poult, and at less cost per bird, than regular 44% protein solvent soybean meal.

The tests used two pre-starter formulas. Each contained 30% of the respective meals and was fed the poult during the 2 weeks following hatching. According to Dr. A. Richard Baldwin, Cargill research director, the higher-protein dehulled meal formula produced a weight gain per bird of .352 pounds as compared to .343 pounds by the regular. The tests also showed the dehulled meal's low fiber content, a maximum of 3%, produced drier droppings than the regular soybean meal with 7% fiber.

Converted to dollars—assuming dehulled meal to cost \$6 more per ton than regular—the dehulled mix produced gain equal to \$4.48 more per thousand birds, or \$55.10 more per ton of feed, than did 44% soybean meal. When the premium for dehulled meal was calculated at \$17—a spread so far encountered only during peak feeding periods—the dehulled 50% meal formula produced \$3.59 more per thousand birds or \$44.16 more per ton.

The comparison formulas each contained, in addition to the meals, ground yellow corn, fish and feather meal, animal fat and trace ingredients.



JAMES M. EPPS, nematologist with the Agricultural Research Service, USDA, and located at the new U-T Nematology Laboratory at Jackson, Tenn., sets up a soybean exhibit at the annual meeting of the West Tennessee Farmers and Homemakers Institute.

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removal and recovery

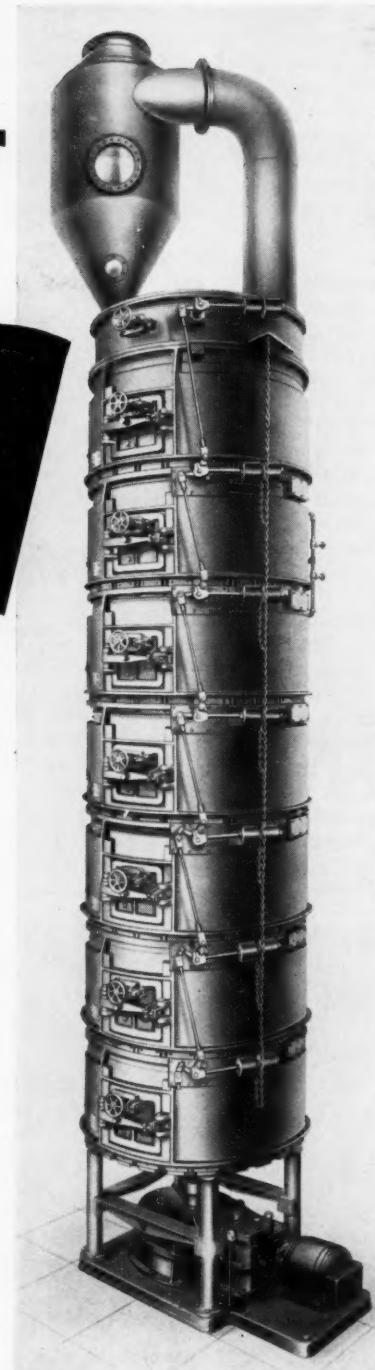
The French DT (Desolventizer-Toaster) represents the most significant advance in desolventizing spent flakes in the history of the oil milling industry.

By eliminating intermediate steps in processing, it reduces costs, speeds production and assures maximum safety.

It reduces solvent loss by 50 to 75% and helps produce a higher quality, more marketable product.

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New GM Product Used in Many Items

A GENERAL MILLS soybean oil product, called EpoxyGen, is helping turn out higher quality vinyl plastic products for the home and industry.

Such items as plastic raincoats, shower curtains, garden hose, auto upholstery, furniture coverings, floor tile, and molded parts are examples of products expected to benefit from this new vinyl resin stabilizer.

Announcement of the new development was made jointly by Sewall D. Andrews, vice president and general manager of General Mills' oil-seeds division, and Dr. R. H. Manley, managing director of the company's central research laboratories.

"EpoxyGen is the result of years of General Mills research on epoxidized soybean oils," Dr. Manley said. "Starting material is refined soybean oil from company plants at Rossford, Ohio, and Belmond, Iowa. Our process enables us to turn out a product with a very high epoxy content and to maintain rigid quality control so that a uniformly high grade epoxidized soybean oil results."

Andrews said that EpoxyGen's remarkably high epoxy content brings new facets of potential to the vinyl plastics industry.

"Tests have shown that a better epoxidized soybean oil stabilizer makes the other ingredients behave better and results in a higher quality vinyl plastic product," he said. "EpoxyGen sharply upgrades quality, yet costs no more than the soybean oil-based stabilizers previously available."

The fact that EpoxyGen contains up to 10% higher epoxy content, up to 50% less impurities, and up to 50% lower viscosity—at no increase in price—will have its effect on the industry, Andrews believes.

For example, he said, a resin compounder can, by using EpoxyGen as the stabilizer, turn out a better product at no extra cost. The higher epoxy content of the new product, along with its purity and compatibility with other resin ingredients, tends to keep all the ingredients in place, even after considerable time.

From the user's point of view, this means that EpoxyGen will lessen the tendency of some familiar vinyl plastic products to darken in color or become brittle with age.

"EpoxyGen is also a bit lighter in color than other epoxidized soybean oils and shows promise for use in white plastics," Andrews added.

While the key market for epoxidized soybean oils at present is for stabilizing vinyl resins, important new uses may be on the horizon for the higher quality EpoxyGen, the company believes.

One possibility is as an ingredient in superior alkyd-type resins for paints. Other potential markets are in lacquers and new types of plastic materials.

Though these are the first General Mills epoxidized soybean oils introduced, the company is no newcomer to the field. Chemists at their central research laboratories first discovered and patented the use of epoxidized fatty esters as plasticizing stabilizers for vinyl resins several years ago. Epoxidized soybean oils are used extensively for this purpose today.

Midsouth Shippers Meet In Memphis Feb. 18

THE MIDSOUTH SOYBEAN and Grain Shippers Association held its annual midwinter workshop Feb. 18

at Memphis, Tenn. Speakers and their subjects included:

Bradley T. Skeels, inspection branch of the U. S. Department of Agriculture's grain division, Washington, "The Grain Standards Act as It Applies to Interstate Shipments of Truck Grain."

Harold C. Wright, Commodity Stabilization Service marketing specialist, Dallas, Tex., "The 1959 Soybean Resale Program of the CCC."

A. A. Williams, executive vice president, Memphis Board of Trade, "The Broker's Place in the Grain Trade."

Dave T. Johnson, Merrill Lynch, Pierce, Fenner & Smith, commodity department, New York, N. Y., "Futures Markets and Hedging."

D. G. Farmer, Douglas Chemical Co., North Kansas City, "Grain Sanitation and Insect Infestation."

President Albert R. Cravens, manager of the Missouri Soybean Co., Caruthersville, Mo., presided. He was assisted by Paul C. Hughes, manager, Farmers Soybean Corp., Blytheville, Ark., secretary of the Association.

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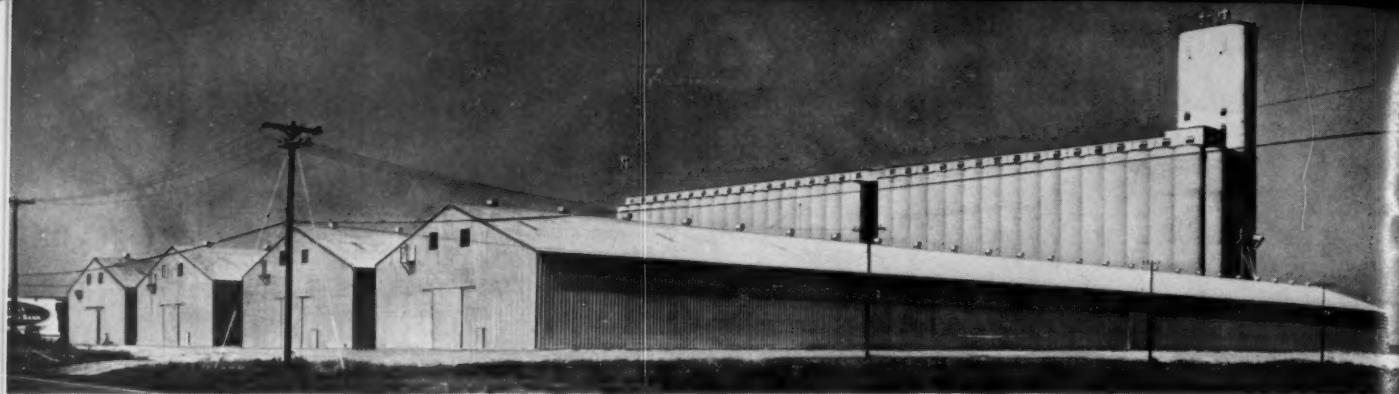
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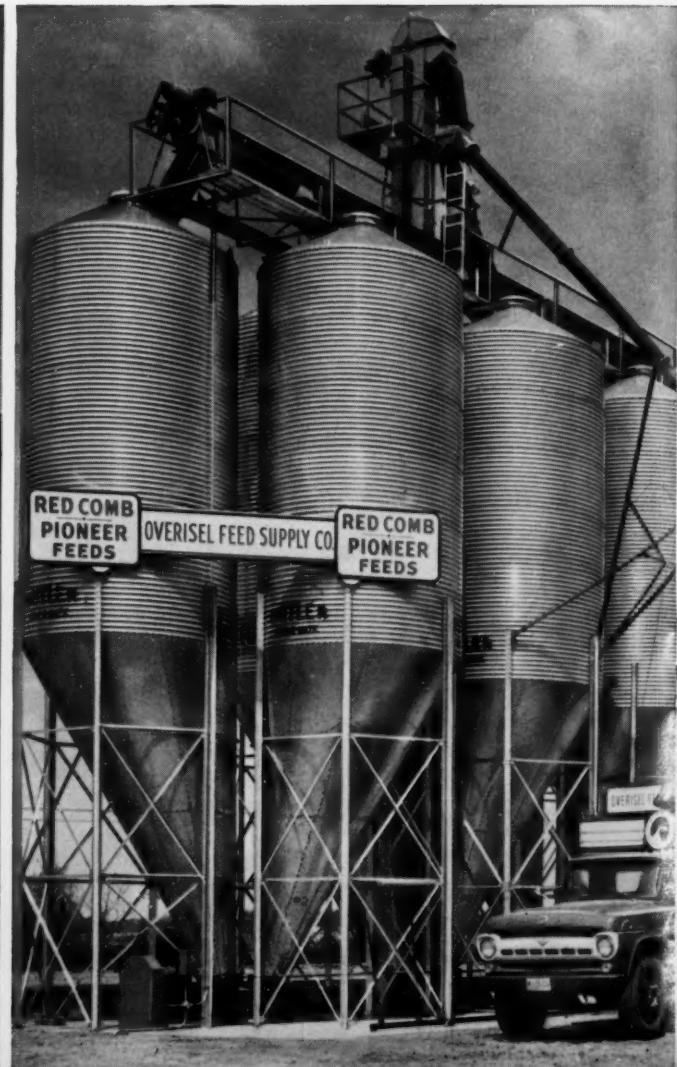
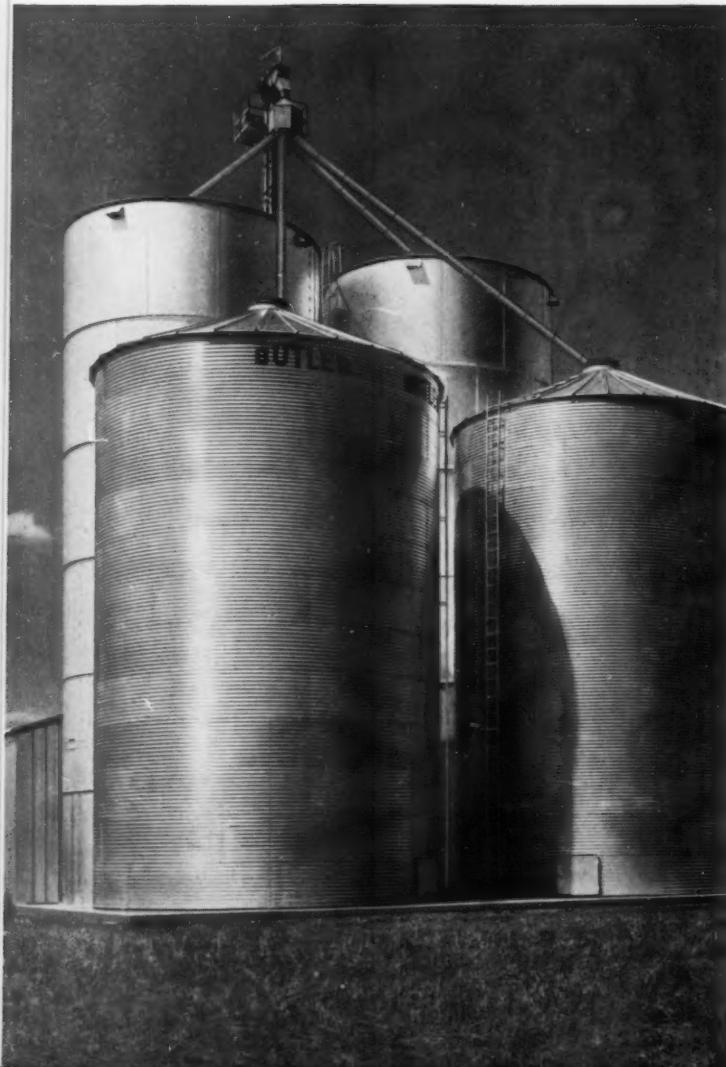
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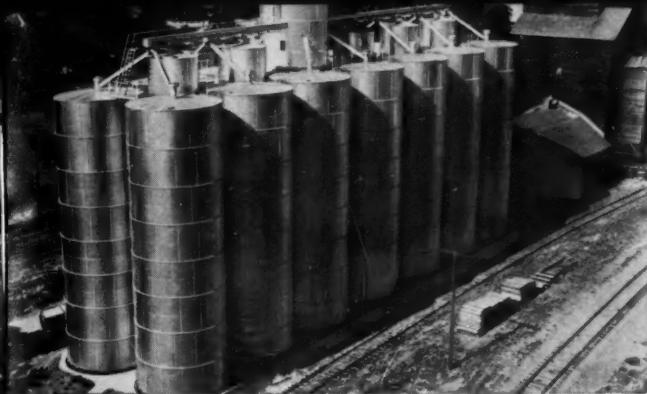
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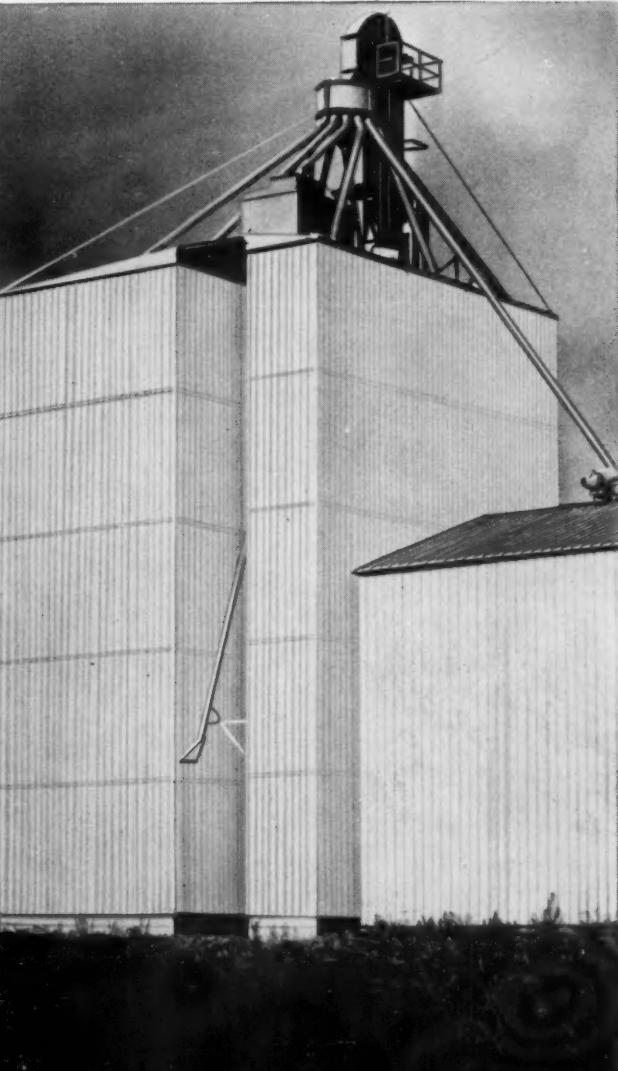
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1-Year Market Project in Israel

A CONTRACT for a 1-year market development project for U. S. soybeans and soybean products in Israel was recently signed by representatives of the Soybean Council of America, Inc., and the Israel Crushers Pool, Ltd., at Tel Aviv, Israel.

The contract will implement a program for expansion of the market in Israel for U. S. soybeans. It was signed by President Howard L. Roach for the Council, and by I. Zwirinsky and A. L. Lichtenstein for the Crushers Pool.

The agreement was the result of a survey made last fall by President Roach and by Fred R. Marti, the Council's director for Europe. They concluded that Israel is a good and growing market for soybeans. The country imported over 3 million bushels in 1958 in addition to vegetable oils under P. L. 480. Soybeans being imported from the United States are giving satisfaction in Israel.

There are nine processing plants in Israel. No livestock feed is being manufactured at the present time, but there is interest in it. The industry also wants information in the proper storage of soybeans.

The program will provide for investigation of the possibility of increased use of fats and oils in vegetable shortening and in industry.

SOYBEAN COUNCIL OF AMERICA, INC.

The Council will provide technical assistance in feeding tests with livestock and poultry. The program will include research on soy flour usage, and investigation of the use of such soy products as soy sauce and other fermented products and soy sprouts in Israel.

All available public relations and educational avenues will be used to give the public information on soy products.

Visit Other Countries

President Roach and Ersel Walley, chairman of the market development committee of the American Soybean Association, were in charge of the Council's soybean exhibit at the U. S. Small Industries Exhibition in New Delhi Dec. 10-Jan. 10. They visited Japan, Hong Kong, Thailand, India, Lebanon, Israel, Turkey and Greece while abroad.

In Turkey there is a growing pressure for higher food standards and a potential need for large quantities of soybean oil.

But due to a serious foreign trade imbalance, Turkey is actually exporting some soybeans grown along the Black Sea, which are basically needed at home.

The desirability of P. L. 480 sales of soybean oil and feed grains to Turkey cannot be ignored, and this should be coupled with a market development project, in the opinion of Roach and Walley.

They found Greece a potential market for soybean oil meal due to a trend toward a rapid development

of the poultry industry and better rations for livestock.

Per capita consumption of fats and oils is low in Greece, but the basic need is for more protein.

The duty on soybean imports is prohibitive. Crushing facilities in Greece are idle many months each year due to a lack of oilseeds.

The olive oil industry is vital, and the industry is jealous of its position.

The two men recommended consideration of livestock feeding demonstrations using soybean oil meal in Greece.



Fred Hafner

Hafner in Charge of Exhibit at Calcutta

FRED H. HAFNER of General Mills, Inc., Minneapolis, departed Feb. 22 for India to take charge of a soybean exhibit at a U. S. Solo Small Industries Fair to be held Mar. 15-Apr. 15 in Calcutta.

The fair, sponsored by the Office of International Trade Fairs, U. S. Department of Commerce, is designed in part to familiarize the people of India with the many ways soybeans and soybean products are being used in products made in America.

Hafner, director of protein operations for General Mills' oilseeds division, traveled to India in the capacity of technical consultant for the Soybean Council of America. He will demonstrate how soybeans and soybean products can be incorporated into the India diet.

A similar fair at New Delhi, which was participated in by representatives from the Soybean Council, generated much interest, and officials anticipate the Calcutta Food Fair will attract widespread attention.

The Council is using the same exhibit as was shown at New Delhi. It was due to the great interest



SIGNING the agreement at Tel Aviv. Left to right, seated, A. L. Lichtenstein, M. Berger, Howard L. Roach, I. Zwirinsky, and T. Leibowitz. Standing, J. Mazur, S. M. Ousiel, Ersel Walley, Russell Hudson, A. Shapira, George L. Peterson and Amous Yoder.

shown in the exhibit of U. S. soybeans and soybean foods that induced the Council to exhibit at the Calcutta fair.

Over 600,000 people visited the U. S. Small Industries Exhibition in New Delhi, and the interest in the soybean exhibit was beyond all expectation.

Government officials including Prime Minister Nehru visited the exhibit.

Poultry Specialist At European Fairs

J. R. SMYTH, head of the poultry department at the College of Agriculture, University of Maine, Orono, left this country Mar. 1 for Verona, Italy, where he will represent the Soybean Council of America, Inc., as a technical consultant at the 61st International Agricultural Fair Mar. 8-16.

Dr. Smyth will be in charge of the Council's mobile exhibit of soybeans and soybean products with emphasis on the feeding of soybean oil meal to livestock and poultry.

He will also be in charge of the Soybean Council's exhibit at the 11th Samples Fair of Sardinia at Cagliari, which follows Mar. 15-29.

Following the Sardinia Fair Dr. Smyth will take part in setting up several farms in Italy for demonstration livestock feeding.

And in May he will go to Madrid, Spain, where he will assist Javier de Salas, director of Spanish operations for the Council, at the Council's soybean exhibit at the Feria del Campo, Spain's largest agricultural fair.

Unload Record Bean Shipment in Israel

THE SHIP, Har Canaan, in January unloaded at the Port of Haifa the largest cargo of soybeans ever to be shipped to Israel.

The shipment totaled 13,570 long tons of U. S. soybeans from the Port of New Orleans. A delay of over 30 days in loading at New Orleans resulted in \$60,000 demurrage charges.

The Har Canaan is owned by Cargo Ships, El-Yam, Ltd., Haifa and Tel Aviv, and Maritime Overseas Corp., New York City.

Above are an interested group watching the unloading of the ship.

Left to right: M. Assa, manager Superintendence Co.; S. M. Ousiel, secretary Israel Oil Crushers Pool; Ersel Walley, chairman of the American Soybean Association's market development committee, Fort



Wayne, Ind.; R. N. Anan, Cargo Ships, El-Yam, Ltd.; Mrs. Howard L. Roach, wife of the president of the Soybean Council of America, Inc., Plainfield, Iowa; Russell J. Hudson, USDA's Foreign Agricultural Service; Joseph Mazour, director oils and fats section, food import department, Ministry of Trade and Industry, GOI; and Mr. Gafney the chauffeur.

Council President Roach took the picture.

AMERICAN SOYBEAN ASSOCIATION

ASA Negotiates Renewal of Japan Project

DAVID R. FARLOW, assistant to the executive vice president of the American Soybean Association, left for Tokyo early in March to arrange with Japanese trade groups and governmental agencies for renewal of the U. S. soybean market development project in Japan for a period ending next Dec. 31.

Purpose of the project is to further the Japanese market for U. S. soybeans and soybean products through a clearer understanding between Japanese and U. S. soybean indus-

tries, and through education of Japanese consumers to the food values of soybeans.

The project, which has been underway 3 years, is sponsored jointly by the American Soybean Association, USDA's Foreign Agricultural Service, and Japanese trade groups. It is financed by P. L. 480 funds and funds contributed by the soybean industry in the United States and Japan.

Operating agency for the project is the Japanese American Soybean Institute under Shizuka Hayashi as managing director.

During the past 3 years the Institute has sponsored a wide range of projects including a soybean exhibit at the International Trade Fair in Japan each year. It has sponsored promotional "weeks" for soybeans in leading Japanese cities, and has worked with nutritionists in health centers all over Japan to educate consumer groups concerning the nutritional value of soybeans and how to use them effectively.

During the past year the American Soybean Association and the Oregon Wheat League have jointly sponsored 12 kitchen cars that have been touring Japan demonstrating the use of soybean and wheat food products.

JAPANESE-AMERICAN SOYBEAN INSTITUTE

Demonstration by Cooking Contest Winners

By SHIZUKA HAYASHI

Managing Director, Japanese American Soybean Institute, Nikkatsu International Bldg., No. 1, 1-Chome Yurakucho, Chiyoda-Ku, Tokyo, Japan

WINNERS AND runnersup in a cooking contest using soybean oil demonstrated their dishes at a contest meeting at Yokohama Feb. 5.

The meeting was under the joint auspices of the Oil and Fat Manufacturers Association and the Japanese American Soybean Institute and was sponsored by the Ministry of Agriculture, Kanagawa Prefecture, and the cities of Yokohama, Yokosuka and Kawasaki. This was the fourth of a series of five such undertakings under arrangement with the Japan oil processors group.

More than 300 schoolgirls and housewives saw the cooking demonstrations of food dishes using soybean oil which were given by the two top winners and the six who won honorable mention. The cooking demonstration was divided into two categories, one covering dishes for school lunches and the other a la carte dishes for family meals.

As the food was being prepared and cooked and all during the demonstrations a trained nutritionist from the prefectural government gave a detailed explanation of the dishes with particular reference to nutritional values. There were also some explanations by the demonstrators. Each demonstration took about 15 minutes. After the dishes were cooked they were placed on a table to be shown to the crowd.

The winners had been selected from 580 contestants who had submitted recipes and applications.

Other events beside the cooking demonstration included a lecture, "Let Us Use More Oil," by Madam Kondo, a leading nutritionist. She emphasized that on the average the Japanese people need a minimum of 25 grams of oil per day. She warned that the eating of rice is excessive in Japan. A good portion should be replaced by easily digested soybean oil, the best of the vegetable oils. Furthermore, oil should be taken daily and not from time to time.

Mr. Baba, chief of the oil and fat section, Ministry of Agriculture, also gave a short speech. Miss Egami of the Japan Broadcasting Station

explained how the judges selected the winners of the cooking contest.

Other speakers included T. Koike, chief of the public health section, Kanagawa Prefecture, Mr. Sugiyama, president of the Oil and Fat Manufacturers Association, and the writer.

A 15-minute tape recording of conversations between Madam Kondo and the winners of the contest was made by Japan Broadcasting Station to be broadcast all over Japan the following day. This was the first meeting where representatives of the Japan Broadcasting Station attended and made a broadcast.



PRESENTATION of awards to winners of the soybean oil cooking contest. Display of prepared dishes is in the foreground.

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PUBLICATIONS

Opportunity for Processors in Mo.

SOYBEAN PRODUCTION in Missouri, which had stood fifth in total yield among soybean producing states for the past several years and in 1958 was fourth, far outstrips the amount of processing within the state, notes Charles C. Harper, research assistant for the Missouri Division of Resources and Development, in a new publication issued by the Division.

For this reason Missouri is the outstanding state from which processors obtain beans.

The cost of acquiring beans represents over one-fourth of the total operating cost for a processing plant, according to Mr. Harper. This major cost can be lessened by locating near the source of beans and by buying direct from producers. Principally because of this, the processing industry is decidedly material-oriented.

Because of the availability of beans, lower acquisition costs, and a location near the center of the industry, there is great opportunity for the expansion of the soybean processing industry in Missouri, the author believes.

Missouri and the Soybean Processing Industry. By Charles C. Harper, industrial section, Missouri Division of Resources and Development, Jefferson Bldg., Jefferson City, Mo.

Soybeans as Cover Crop To Control Potato Scab

SOYBEANS offer great promise as a cover crop for the control of potato scab, California tests indicate.

"This work has been under way since 1948 when we began testing the effect of a number of cover crops and rotations on the buildup of potato scab in soil," writes John W. Oswald, professor of plant pathology at the University of California, Berkeley. "By far the most striking results of this 10-year study have been the effectiveness of soybeans as a green manure cover crop in preventing the buildup of scab diseases."

Four rotations in the test involved potatoes each year. One of these had no cover crop, and the other three had either soybeans, fall peas or fall barley green manure cover crops between each potato crop.

In the first crop all rotations yielded tubers that were marketable.

After the seventh consecutive potato crop only 48% of the tubers from the check plot were marketable, and the results with fall peas were approximately the same. Only 27% of the tubers were marketable from the plot with the barley cover.

But all tubers of the seventh potato crop with annual soybean green manure crops were marketable.

Soybeans as a Green Manure Crop for the Prevention of Potato Scab. By John W. Oswald and O. A. Lorenz. Department of Plant Pathology, University of California, Berkeley 4, Calif.

Reports Record Hedging In Soybeans on '58 Crop

HEDGING in wheat and soybean futures for protection against price risks furnished a striking example of the effective utilization of futures trading in 1958 in the marketing and distribution of farm crops, the U. S. Department of Agriculture reports.

With record production of soybeans in 1958, the hedging utilization of the soybean futures market has been at record levels in recent months, reflecting major emphasis on hedging sales for price protection on large supplies of beans moving to processing plants for soybean oil and meal production.

In both the soybean oil and soybean meal futures markets, short hedging commitments have also been at high levels in recent months.

Futures trading in all regulated commodities in the 1958 fiscal year ending last June 30 totaled \$33.7 billion. Wheat futures accounted for \$11.1 billion, soybeans \$9.1 billion, cotton \$4.5 billion, corn \$2.5 billion, eggs, \$2.1 billion, and other commodities \$4.4 billion.

Commodity Futures Statistics, July 1957-June 1958. USDA Statistical Bulletin No. 239. Commodity Exchange Authority, U. S. Department of Agriculture, Washington 25, D. C.

Clark Variety High In Illinois Tests

THE CLARK variety has averaged highest in yield in seven locations in 4 years of tests by the University of Illinois, UI reports.

Clark's average yield for the seven locations over the 4-year period was

39.8 bushels per acre. (Tests of Clark were for only 3 years at two locations.)

Clark was not tested in northern and north central Illinois. In these districts Harosoy and Adams had the highest average yields respectively.

Varieties tested included Chippewa, Blackhawk, Lindarin, Harosoy, Hawkeye, Adams, Ford, Lincoln, Shelby, Clark, Wabash, Dorman, Ogden and Lee. The last four varieties and Ford and Blackhawk are not recommended in Illinois.

Soybean Variety Trials in Illinois. Agronomy News, No. 95, Dec. 15, 1958. College of Agriculture, University of Illinois, Urbana, Ill.

County Estimates of Soybean Production

COUNTY estimates of soybean production for 1956 and 1957 are shown for 24 leading soybean producing states by the U. S. Department of Agriculture. Although soybean production is estimated in 30 states, these 24 states produce more than 99% of the crop.

Counties are grouped by crop reporting districts, and acreage, yield and production of soybeans harvested for beans are shown.

Soybeans Harvested for Beans by Counties, 1956 and 1957. U. S. Department of Agriculture, Agricultural Marketing Service Crop Reporting Board, Washington 25, D. C.

Soybeans Grown by 14 N. J. Counties

FOURTEEN counties in New Jersey reported some soybean production in 1956, and the state's crop totaled over 1 million bushels.

Production by counties for the 1953-56 crops is reported in New Jersey Agricultural Statistics.

New Jersey Agricultural Statistics, 1945-56. Circular 404. New Jersey Crop Reporting Service, Trenton, N. J.

Soybean Varieties Recently Released for Arkansas. By C. E. Cavniss. Arkansas Farm Research, November-December 1958. University of Arkansas, Fayetteville, Ark.

Virus Diseases of Soybeans Present in Arkansas. By H. J. Walters. Arkansas Farm Research, November-December 1958. University of Arkansas, Fayetteville, Ark.

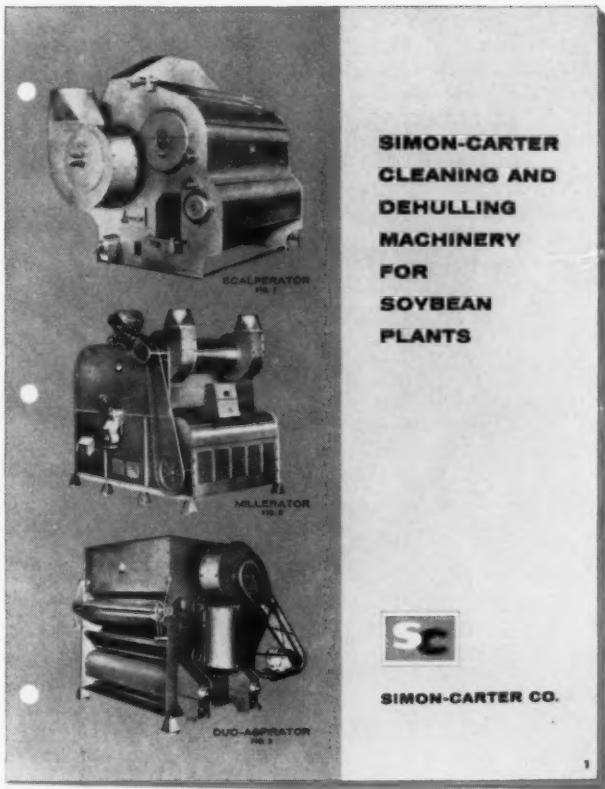
The U. S. Trade Missions Program. Bureau of Foreign Commerce, U. S. Department of Commerce, Washington 25, D. C.

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GRAIN DRIERS. The Grain Drying Equipment Co. announces its 1959 line of commercial driers. These driers, available in sizes from 125 bushels per hour up to 1,500 bushels per hour, are self-housed and are fully equipped with the latest automatic safety and temperature controls.

Uniform, high quality of drying is accomplished by means of narrow column walls and large volumes of drying air. A variable-flow metering system is provided to remove the dry grain evenly from all columns.

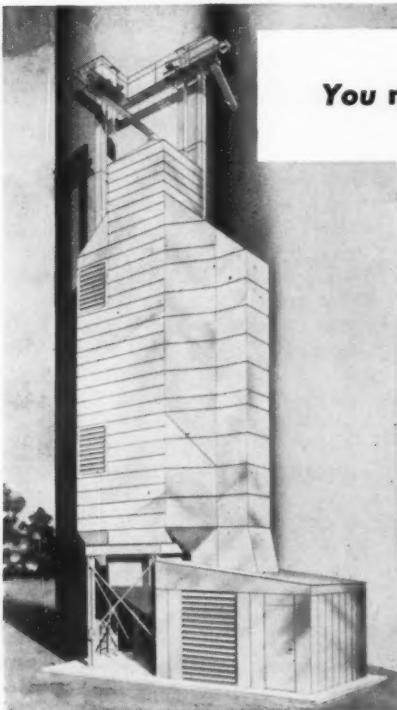
For further information write Soybean Digest 3d, Hudson, Iowa.

VAC-U-VATOR. An entirely new Vac-U-Vator capable of conveying, cleaning, conditioning and aerating grain from 30% to 90% faster, and moving grain up to 50% more distance was announced by Dunbar Kapple Inc., during a recent 2-day sales conference.

Embodying an entirely different pneumatic engineering concept the "Vac" operates with a highly efficient balance of free air, power, and grain. Called "dynamic flow balance" the new pneumatic system provides increased grain-moving speed and reduced operating costs.

The completely mobile unit is available in two and three stage sizes. The two-stage Vac is rated at approximately 20% more capacity than current three-stage Vac-U-Vators. The new three stage machine is said to nearly double the output of its three-stage contemporary, particularly on long conveying distances.

For further information write Soybean Digest 3e, Hudson, Iowa.



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CULTIVATORS. The J. I. Case Co. recently unveiled its new Model 460 (four-row) and 660 (six-row) cotton and corn cultivators for 1959.

The company stated that the Models 460 and 660 cultivators are designed to be mounted on Case 4 and 5-plow tractors with dual front wheels or adjustable front axle, plus eagle hitch. They cultivate up to 70 (four-row) or 100 (six-row) acres a day. The four-row is designed so that it can be expanded to six-row.

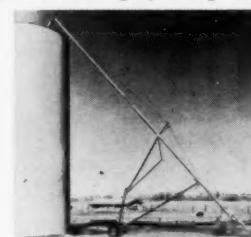


These cultivators are designed for convenient drive-in mounting and dismounting to save time and effort, avoid lifting.

For further information about Models 460 and 660, and also concerning Models 434 and 636 pull-type corn cultivators write Soybean Digest 3a, Hudson, Iowa.

PORTABLE AUGER. Mayrath, Inc., announces its new 60-foot portable 6-inch auger.

The auger, complete with carriage, motor mount, winch and belts, will fill the new 9,000-bushel grain bins. Manufacturer states it will lift 42 feet high, with 12 feet horizontal reach over side of bin and will move 30 bushels per minute.

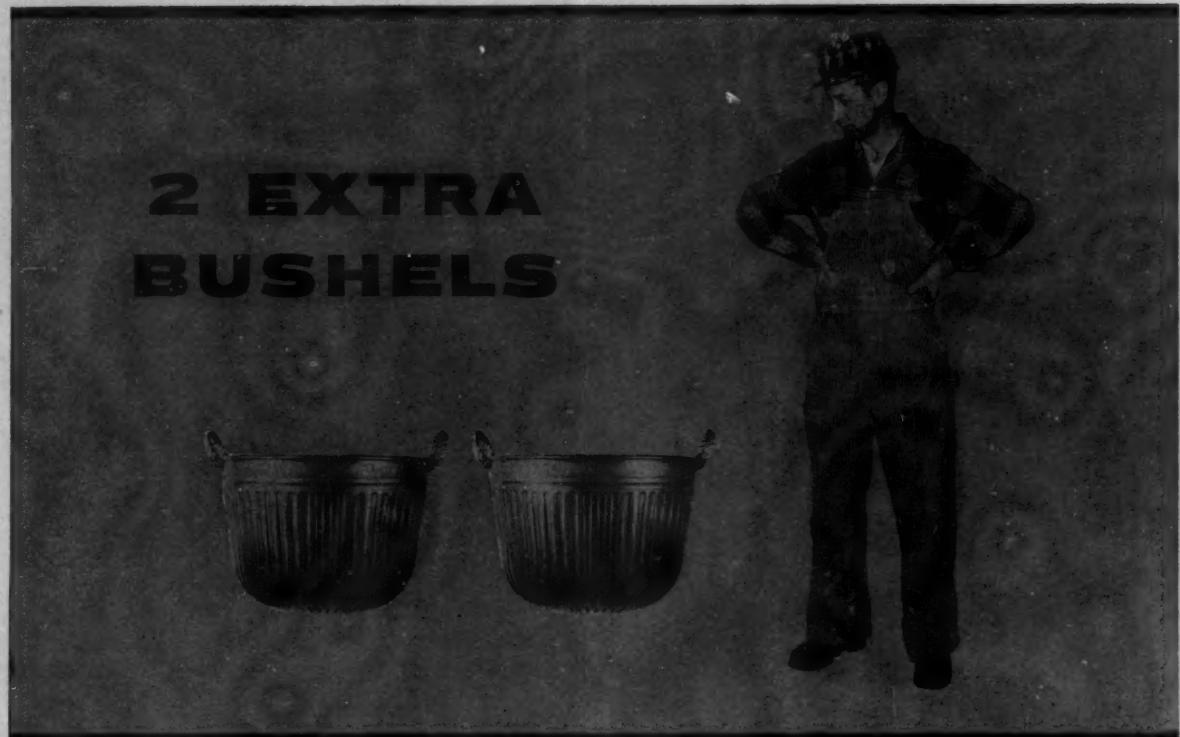


Auger can be powered with gas engine, electric motor or tractor power take-off.

For further information write Soybean Digest 3c, Hudson, Iowa.

NODOGEN'S Mr. Fixo

Pays BIG on Beans



**2 EXTRA
BUSHELS**

**Pre-Tested Nodogen "Makes" 2 Extra Bushels
of Soybeans Per Acre for Less than 15 Cents**

Big returns in extra yield and profits . . . for such a small investment! That's because Nodogen's Mr. Fixo inoculator contains billions more active, effective nitrogen-fixing bacteria. Nodogen's consistent high quality — which can be verified by any state or federal agency that tests inoculants — is your insurance of better legume crops, higher yields, extra profits. Nodogen is so easy to use, wet or dry, and costs just a few cents per acre.



NODOGEN LABORATORIES

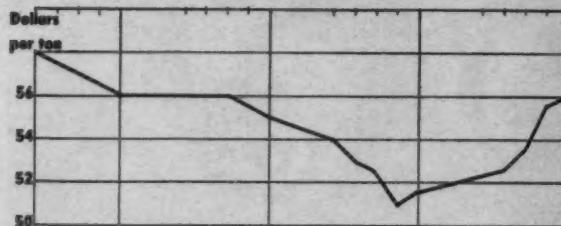
2750 W. 35th St., Chicago, Illinois



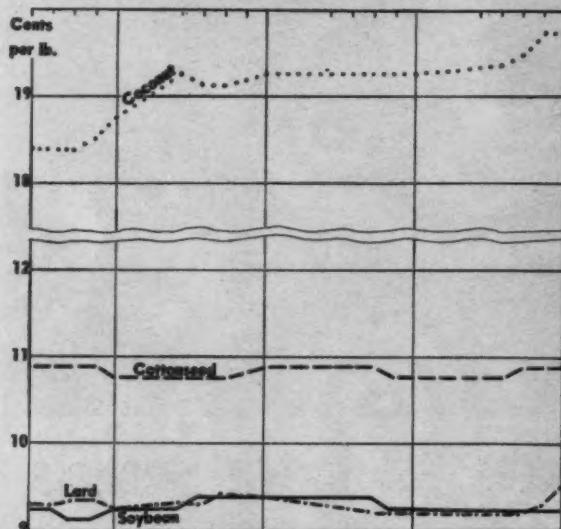
DAILY MARKET PRICES
No. 1 Cash Soybeans, Chicago



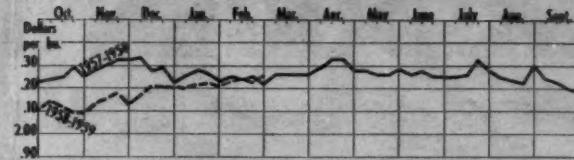
Bulk Soybean Oil Meal, Decatur



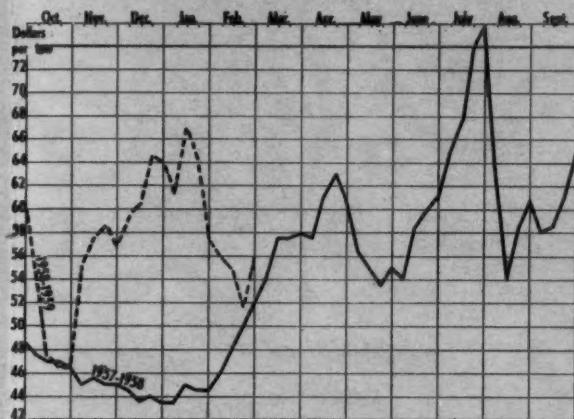
Crude Vegetable Oils and Lard



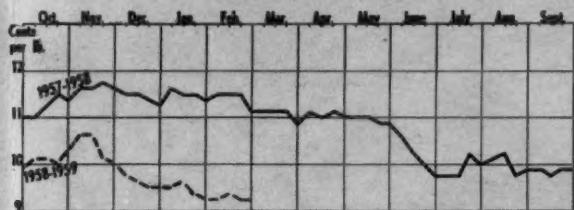
TRENDS AT A GLANCE (Weekly Close)
No. 1 Cash Soybeans, Chicago



Bulk Soybean Oil Meal, Decatur



Crude Soybean Oil, Tankcars



2—A somewhat smaller volume of 1958-crop soybeans under price support Jan. 31 than was expected.

3—Improved prospects for export business. Purchases of soybean oil by Israel, Spain and Yugoslavia, and soybeans by Japan were reported during February. An agreement for sale of a large volume of vegetable oil was signed with Turkey with the purchase authorization announced late in the month. A barter deal was made with Japan for trade of 1.8 million bushels of CCC-held soybeans for Japanese manganese.

Crushings continued heavy in the face of weakness in meal, with most processors operating at capacity.

A fair country movement of beans was reported. These were apparently a cleanup of beans not taken into the support program.

BYPRODUCTS. The price of soybean fatty acids remained at 15½¢ per pound during February. Acid soybean soap stock advanced from 4½¢ to 4¾¢, and raw soybean soap stock remained at 1¾¢ per pound.

1957 AND 1958 SOYBEAN CROPS

1958 1957

Total soybeans placed under price support as of Jan. 31 124,304,620 bu. 89,691,550 bu.*

Soybeans crushed Oct. 1-Jan. 31 137,991,303 bu. 116,787,000 bu.

Total soybeans inspected for overseas export plus lake shipments to Canada Oct. 1-Feb. 20 55,498,965 bu. 50,710,270 bu.

* Feb. 15.

February Markets

THE CONTINUED decline in the meal market, which lost \$16 at the low from January's high point, featured the first 3 weeks in February. There was little net change in oil, but it did reach the lowest point since February 1952. Beans were stronger at month's end.

The slump in meal prices was due to slow feed business. Mixed feed sales dropped 20% but were still equal to last year's buying pace. Both farmers and feed mixers were believed to be living off inventories. Cold weather and icy highways were a factor, but there was some price resistance reported with farmers turning to homegrown grains.

However, oilseed meal consumption of 3.3 million tons for the first quarter in the new marketing year was 16% above the same months last year. Exports of 150,000 tons the first quarter were above the 94,300 exported the first quarter last year.

Other factors in February were:

1—USDA's announcement of \$1.85 price support on 1959-crop soybeans, 24¢ under last year, and of a parity price 17¢ below last year.

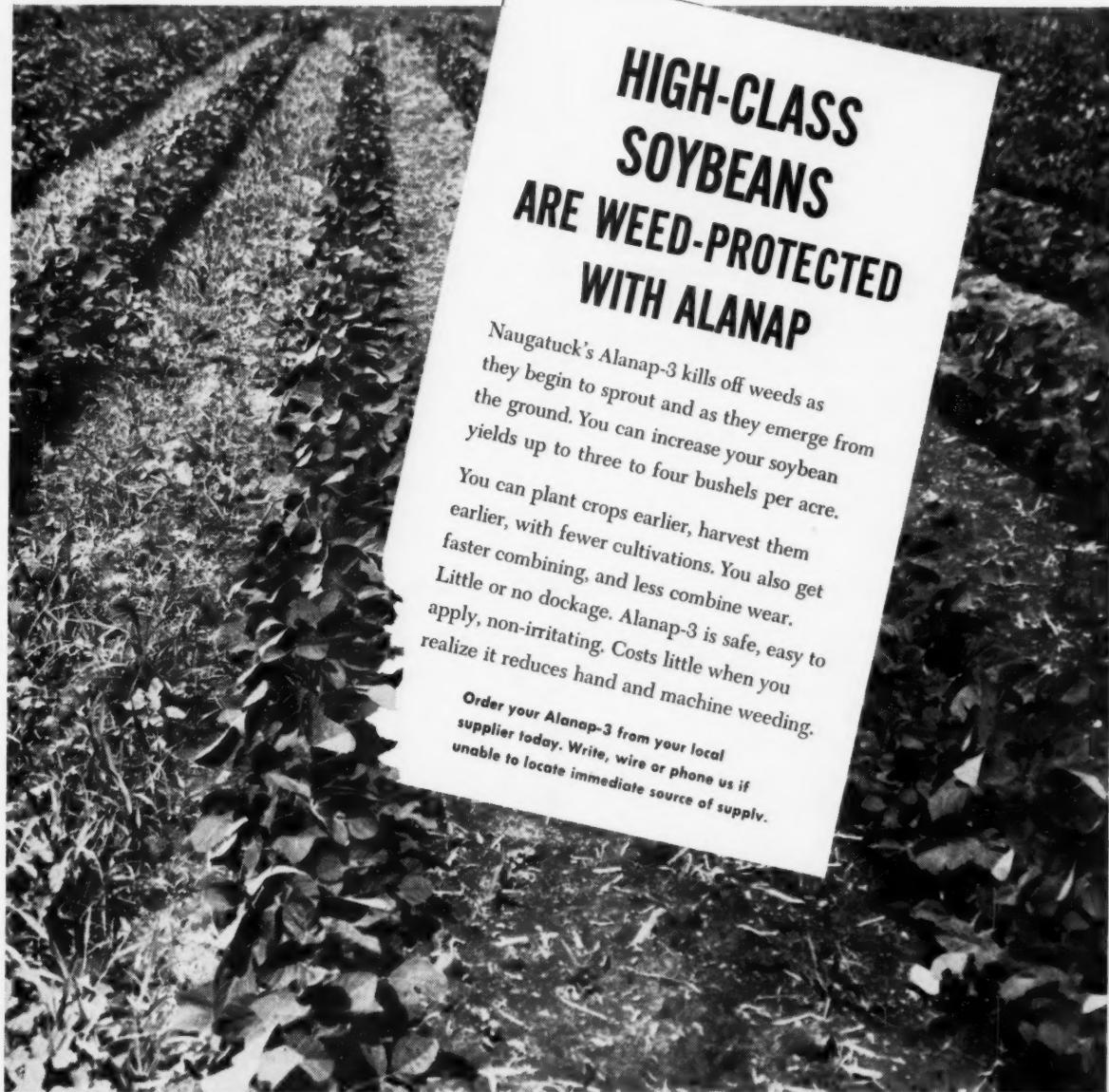
• ALANAP®

PRE-EMERGENCE WEED CONTROL

HIGH-CLASS SOYBEANS ARE WEED-PROTECTED WITH ALANAP

Naugatuck's Alanap-3 kills off weeds as they begin to sprout and as they emerge from the ground. You can increase your soybean yields up to three to four bushels per acre. You can plant crops earlier, harvest them earlier, with fewer cultivations. You also get faster combining, and less combine wear. Little or no dockage. Alanap-3 is safe, easy to apply, non-irritating. Costs little when you realize it reduces hand and machine weeding.

Order your Alanap-3 from your local supplier today. Write, wire or phone us if unable to locate immediate source of supply.



Note weed choked
untreated rows



United States Rubber

Naugatuck Chemical Division

396 AL Elm Street, Naugatuck, Connecticut

producers of seed protectants, fungicides, miticides, insecticides, growth retardants, herbicides: Spergon, Phygon, Aramite, Synklor, MH, Alanap, Duraset.

GRITS and FLAKES... from the World of Soy

Suelzer Promoted to Meal Sales Manager

The promotion of Thomas J. Suelzer to the position of manager of meal and oil sales effective Feb. 1



T. J. Suelzer

was announced by **Central Soya Co., Inc.**, Fort Wayne, Ind.

Mr. Suelzer's responsibilities will cover the sale of both soybean meal and oil from processing operations located at Decatur and Indianapolis, Ind.; Gibson City and Chicago, Ill.; Marion, Ohio; and Chattanooga, Tenn.

Mr. Suelzer joined Central in the accounting department in 1946 and in 1954 became a member of Central Soya's meal and oil sales staff in Fort Wayne, where he will continue to make his headquarters.

Gartside Joins Iowa Soya Co.

Effective immediately, William T.

Gartside, senior partner of **W. T. Gartside Co.**, Chicago vegetable oil brokers, will no longer be associated with this company.

Mr. Gartside has accepted a position with Iowa Soya Co., Redfield, Iowa, soybean processors and refiners, as manager of oil sales and trading. He will maintain offices in Chicago.

Lloyd J. Smith will be sole proprietor of W. T. Gartside Co. He will continue this company's brokerage business in fats, oils, and related products at the present company address, 2546 Peterson Ave.

Aschwanden Manages ADM Fats, Oils Department

Albert Aschwanden, New York, has joined **Archer-Daniels-Midland Co.** as manager of the fats and oils department, E. A. Olson, ADM administrative vice president, announced.

A native of Switzerland, Aschwanden has been engaged in the international trading of fats and oils

in Switzerland, England and this country since 1943.

For the past 5 years he has been export manager for Acme Mercantile Co., New York.

Aschwanden's headquarters will be at ADM's general offices in Minneapolis. The company carries on a world-wide trade in vegetable and marine fats and oils.

Heimovics Is Sales Manager for Shanzer

John F. Heimovics, well-known grain processing executive, has been appointed general sales manager for the complete line of **Shanzer** grain drying equipment.

For the past several years he has been a member of the Jones - Hettelsater Construction Co. staff, specialists in the design and construction of grain elevators and processing mills. Prior to that he was an operating executive of J. B. Ehksam & Sons Manufacturing Co., manufacturers of grain processing equipment.

Mr. Heimovics will operate from Kansas City, Mo.

Shanzer's home office and plant are in San Francisco. Other Shanzer sales offices are located at Minneapolis, Minn., and Jackson, Mich.

In addition to Shanzer's commercialized drier unit line, Mr. Heimovics will concern himself with the rapidly expanding interest in the firm's new on-the-farm crop drier.



John F. Heimovics

FOR SALE Fully Equipped Solvent Extraction Plant Oswego, New York

PRICED FOR
IMMEDIATE
SALE

BROKER'S
COOPERATION
REQUESTED



FREE DESCRIPTIVE BROCHURE

OVER 150,000 SQ. FEET OF GROUND FLOOR SPACE
PLANT OR EQUIPMENT AVAILABLE SEPARATELY

**HENRY S. HARRISON
BUSINESS BROKERS**

315 Whitney Avenue

New Haven, Conn.

Purina Forms Special Soy Products Division

A special soy products division has been formed by **Ralston Purina Co.** as part of the soybean division with Wayne E. Tjossem as manager. Donald B. Walker is director of the soybean division.

Mr. Tjossem comes to Purina from the chemurgy division of Central Soya Co., Inc., Chicago, formerly a division of the Glidden Co., where he was assistant to the vice president of that division.

Mr. Tjossem's appointment was effective Feb. 16. He will assume overall marketing responsibility for all Purina soy products other than soybean oil and meal.

Beyer New Kellogg Vice President

Robert L. Beyer has been appointed vice president in charge of sales and public relations for **Spencer Kellogg & Sons, Inc.**, Buffalo, N. Y. He has been general sales manager of the company since 1953.

Mr. Beyer began his career with Kellogg's in 1935 in oil sales work. Among his current assignments are: member of the company's executive committee, chairman of Kellogg's research advisory committee.

The **American Oil Chemists' Society** will hold its golden anniversary meeting in the Roosevelt Hotel in New Orleans, La., Apr. 20-22, according to C. L. Hoffpauir, general chairman of the New Orleans convention committee.

A new southeastern U. S. sales office of the chemical division of **General Mills** has been opened at 213 E. Moorhead St., Charlotte, N. C., Howard T. Von Oehsen, divisional manager of sales, has announced.

A. A. Robinson, former sales representative for **R. J. Brown Co.**, St. Louis, Mo., in the South and Southeast territories, has been promoted to division manager with headquarters at Louisville, Ky. Robert J. Kaiser, Jr., will represent R. J. Brown in the South and Southeast territories, working under the supervision of Mr. Robinson.

Paul J. Queroli, plant manager and assistant secretary-treasurer of the **Borden's Soy Processing Co.** at Waterloo, Iowa, died Feb. 8 following a heart attack. Mr. Queroli, who was 59, had been employed by the Borden Co. 44 years.

The **Tennessee Belting Co.**, Memphis, Tenn., has recently added a new salesman, Bill Minor, to travel Arkansas. For many years Mr. Minor was representative for Quaker Rubber Corp.

Burrows Equipment Co., Evanston, Ill., announces two promotions. John W. Wastcoat, previously general sales manager, has assumed the duties and title of traffic manager. And Forrest J. "Frosty" Sanderson becomes service manager.

The 24th Annual Chemurgic Conference will be held at the Congress Hotel in Chicago Apr. 1-3, the **Chem-**

urgic Council announces. A soybean session is planned.

An option to purchase a 21-acre piece of land at Mount Vernon, Ind., with substantial frontage on the Ohio River, has been acquired by **Central Soya Co., Inc.**, Fort Wayne, Ind. A grain merchandising operation is planned for the site, according to Dale McMillen, Jr., company president. "The facilities to be erected will be served by the Chicago & Eastern railroad, and they will undoubtedly be completely diversified to include truck and barge operations as well," he said.

Earl M. McGowin, an industrialist from Chapman, Ala., has been appointed director of the **Alabama State Docks**, an agency of the state which operates the \$50 million ocean terminal at the Port of Mobile, and the expanding network of barge terminals on the state's navigable rivers.

Dannen Mills has started construction of four steel tanks with a grain storage capacity of 2 million bushels adjacent to its Missouri River wharf at St. Joseph, Mo. The additional storage will bring Dan-

nen's grain capacity in St. Joseph to 9.5 million bushels.

The 1959 **College-Feed Industry Conference** will be held Sept. 18 at Iowa State College, Ames, Iowa. Professor Emmet Haynes is chairman.

Dunbar Kapple, Inc., Geneva, Ill., has appointed Paul H. Cooper sales manager of its agricultural Vac-U-Vator division. For the past 10 years he has been manager of the industrial division of O. A. Newton & Son, Bridgeville, Del.

Chester B. Biddle, **Biddle Farms**, Remington, Ind., has been elected vice president of the Agricultural Alumni Seed Improvement Association at Lafayette, Ind.

Dabney-Hoover Supply Co., Memphis, Tenn., has been appointed exclusive distributor for the Cortland Grinding Wheel Co., Chester, Mass.

Dabney-Hoover Supply Co. has a contract for the storage and handling equipment for an additional 50,000 bushels at the Clarksdale Grain Elevator Co., Clarksdale, Miss. Present capacity at Clarksdale is about 200,000 bushels.

INOCULATE SOY BEANS

with



IT PAYS!

The Urbana Laboratories
Urbana, Illinois

WASHINGTON DIGEST

See Million-Acre Drop in Plantings

THE 24¢-A-BUSHEL drop in price support for soybeans produced this year is expected to reduce plantings by a million or more acres, though there is no agreement in official circles here as to what the cut might amount to.

A few officials think 1959 plantings will be as large as last year, and they are making a very tentative estimate of a crop of 550 million bushels. These, however, appear to be in the minority.

The wide-open character of the new corn loan, rather than the reduction in soybean price support alone, is most often given as the reason for encroachment of corn into soybean acres in the coming year.

The new corn loan rate averages \$1.12 a bushel. It is available to all producers with no allotment restraints. The 1958 weighted average rate for corn (currently an estimate) is \$1.14 a bushel. This counts both the compliance rate of \$1.36 a bushel and the non-compliance rate of \$1.06. A substantial increase in acreage from those who kept within allotments is anticipated this season.

A small factor on soybean acreage this year is the amount of land in the conservation reserve. The

estimate of total acres in the reserve, excluding duplications, is now 23.2 million. About 10 million of the total represents holdover contracts.

An estimated 968,000 acres of soybeans, with a "normal" production of 18.4 million bushels, are included in the conservation reserve.

The new soybean loan averages \$1.85 a bushel, approximately 64% of the revised parity which went into effect with the first parity report in late January. Flaxseed support was set at \$2.38 a bushel, 60% of parity, and cottonseed at \$38 a ton for loans on farm-stored seed (\$34 a ton for purchased seed), 57% of parity.

The drop in price support for corn and cotton as the result of 1958 legislation, plus a lower parity for soybeans this year, pulled down support for the oilseed crops. Flaxseed and soybeans have to be kept in line with each other, and soybeans in line with the support for corn. Under law, the support level for soybeans and cottonseed must be at a level permitting the two seeds to compete on equal terms.

Price support for cotton will average lower this year because of a reduced level of support authorized for



By PORTER M. HEDGE
Washington Correspondent for
The Soybean Digest

cotton planted in excess of acreage allotments.

The decline in corn and cotton influenced the rate of parity support. The change in the computation of parity had a big influence on the dollars and cents level of support.

It had been determined early to set soybean price support at around 65% of parity, in line with the minimum percent allowed for corn. Had the old method of calculating parity been retained, this would have resulted in a soybean loan rate of \$1.95 a bushel. The new method reduces soybean parity 10¢ a bushel.

Parity for soybeans in December was \$3.07 a bushel. In January it had dropped to \$2.90 a bushel due to a shifting base price and a change in calculating the index of farm costs, or parity index. Had the change not been made, parity in January would have been \$3 a bushel.

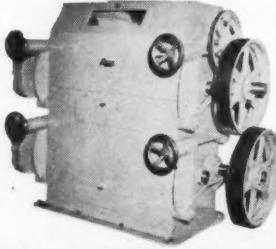
Parity is obtained by multiplying the farm cost index by a base price established for the commodity involved. The new parity reflects changes that have taken place since the early 50s, and in the opinion of all officials is more representative than before. More weight is given to the less expensive production items in the cost index, and less weight to the more costly living items. The result is to reduce the cost index and to lower the parity value.

Equity payments will no longer be made beginning with 1959 crops. Such payments have been made in the past when the market price at the time of takeover was above the loan rate plus charges. Commodity Credit Corp. would take over the crop, and pay the producer the difference between loan rate plus charges and the market price—in effect market the crop for him. Under authority granted last year, these no longer will be made.

Soybean support will be handled as it has been through loans and pur-

ANNOUNCING

**A
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ROSS HEAVY DUTY SOYBEAN MILL

This new Ross Model mill is the latest addition to the Ross line of Roller Mills, for over 25 years the Acme of perfection in roller mills and rolls for all purposes: grinding, crimping, crumbizing, cracking and flaking. 24 Sizes in four different models available. Standard Rollerator, Heavy Duty, Heavy Duty Jr. and 2 High Models.

The Ross Heavy Duty 2 and 3 Pair High Heavy Duty Soybean Mill or Cracking Mill is a specially designed unit for the cutting and processing of soybeans and other hard grains. Each unit is expressly designed for the heavy duty 24 hour service requirements necessary to process soybeans. Equipped with special alloy Turn-Tuff rolls of highest quality, you are assured of maximum service with the special Turner Rolls of super hard quality. Heavy Duty $\frac{1}{2}$ " steel seamless welded housing with oversize roller bearings and special solid corrugated feeder rolls of semi steel, all stainless steel gates, heavy plated fittings, heavy duty enclosed chain differential drives with positive roll trammimg, quick throughput levers and gear washer protection for rolls. A special soybean corrugation is usually used on these rolls available in reduction multiples of 4-5 to 12-14 corrugations per inch, with differentials to suit.

All Ross units are furnished with highest grade deep chill, Turn-Tuff chilled iron rolls by Turner, World's largest roll makers. Tough hard biting corrugations for years of service.

★ No Gadets ★ 24 Hour Service ★ Positive Tram & Roll Setting
★ Dust Free Operation ★ All Metal ★ Anti Friction Roller Bearings
★ Solid Roll Feeder ★ Stainless Steel Gates ★ V-Drive to Suit
★ Enclosed Chain Differential Drive ★ Alloy Shafts ★ Sensibly Priced

★ Write for folders & prices on Mills and rolls. ★ Agents-Principal Cities
chills. Free Complete Catalogue

ROSS MACHINE & MILL SUPPLY, INC.

12 N.E. 28th St. Jackson 8-2132 OKLA. CITY, OKLA.

chase agreements. Loans will be available from harvest through Jan. 31, 1960. Loans will mature May 31, 1960. Beans must grade No. 4 or better and contain not more than 14% moisture to be eligible for price support.

USDA hasn't started work yet on soybean county rates. They probably will be delayed until May. Both the 10-year and the 3-year moving average price are considered in making up county rates, so no major changes are expected. However, soybean production and markets have been changing so rapidly in recent years that considerable weight is given to the 3-year average prices, officials say.

In its price support announcement USDA puts some emphasis on the supply of oilseeds in relation to demand, and to CCC's ability to dispose of stocks.

Volume Under Support

USDA reported 124,304,620 bushels under support from the 1958 crop—a new high, Jan. 31. The total compares with 58.2 million under support on Jan. 15 last year and 89.7 million under support through Feb. 15 last year.

An increase of anywhere from 15 to 20 million bushels in the price support total is expected when all the returns are in. There is a lag of several million bushels in reporting.

Warehoused beans accounted for 70,286,049 bushels of the total under support. Farm-stored loans totalled 46,058,300 bushels. Total for purchase agreements is 7,960,271.

Humphrey's Bill

Senator Hubert Humphrey of Minnesota is about to introduce a bill which would require greatly increased use of foods over an extended period of years in a "Peace Food Administration" setup as an instrument of foreign policy rather than surplus removal.

The proposal would establish a new peace food agency to handle the program and to use food as means of winning and helping friends overseas, and making what the Senator considers better use of America's productive capacity. The Senator's office has been asking USDA officials for figures on the volume of edible oils considered as surplus this year, and an estimate of "surplus" next year.

The sights on the Humphrey bill are so high the bill is not expected to pass in its present form this year, or to be approved by the President if passed. However, there is wider

recognition in the Senate this year of the need for moving commodities into export through programs such as P. L. 480 and direct subsidy if necessary than there has been in recent years.

Though the Humphrey proposal may not become law, it is expected to result in a longer-term extension of P. L. 480, and a possible broadening of the program.

Margarine Production Set New Record in '58

MARGARINE production in 1958 set

a new alltime record for the third consecutive year, Siert F. Riepma, president of the National Association of Margarine Manufacturers, has announced.

A report released by the U. S. Department of Commerce, he noted, estimates that 1,573 million pounds of margarine were produced in the United States last year, compared with 1,463 million pounds in 1957, an increase of approximately 8%.

Creamery butter production in 1958, Riepma pointed out, was 1,386 million pounds, 2% below the previous year's production.

ORDERLY MARKETING OF SOYBEANS

ASSURES A SOUND INDUSTRY

The general technique of moving soybeans through the normal channels of trade by government assistance in the marketing of the oil fraction is of tremendous significance. It is vastly superior to the system devised primarily for grains and cotton of government *loans and CCC acquisitions*, for the following reasons:

1—The increase in net farm income is greater than any possible government costs.

2—More soybean meal is available at reasonable prices, thus providing better balanced rations and better net returns to livestock and poultry producers.

3—The soybean crop moves into consumption and not into government storage.

4—Exporters and importers of soybeans are commercial buyers in the open market—not "bargain hunters" from government hoards.

LAUHOFF SOYA CO.

DANVILLE, ILLINOIS

Phone 6-4770

- MARKET STREET -

We invite the readers of THE SOYBEAN DIGEST to use MARKET STREET for their classified advertising. If you have processing machinery, laboratory equipment, soybean seed, or other items of interest to the industry, advertise them here. Rate 10c per word per issue. Minimum insertion \$2.00.

FOR SALE—FORDS PORTABLE feed grinder with mixers. Have one exceptionally good used outfit. H. L. Myers, Route No. 3, Alliance, Ohio. Phone TA3-7209.

WANTED: FLAKING AND CRACKING rolls, meal coolers and driers and rollermills. Soybean Digest, Box 319-J, Hudson, Iowa.

FOR SALE—CERTIFIED AND registered soybean seed, Harosoy, Chippewa, Grant, Comet, Acme and Norchief. Also Minhafer and Burnett oats. J. H. Schrooten, Fairmont, Minn.

LATE 1956 CHAMPION MOBILE feed unit, with molasses tank and blender. Two-ton upright mixer mounted on 2-ton Ford cabover truck with two-speed axle. All in excellent condition. Price \$5,500. Raymond Oleson, Livingston, Wis., Phone 71.

HELP WANTED—EXPELLER OPERATOR for oil mill located in Florida. Will supply housing. Good working conditions. State experience and salary. Soybean Digest, Box 319-S, Hudson, Iowa.

FOR SALE—ANDERSON Expellers and French screw-presses, cookers, driers, 5-high, 48-inch crushing rolls, 36-inch attrition mills, sewing machines, hammermills, cracking rolls, filter presses. Ray L. Jones, 1923 Hayeslon Drive, Jefferson City, Mo.

GRAIN STORAGE BINS—IN 30 king sizes, from 3,300 to 36,000 bu. to choose from, in big demand for CCC storage. For particulars write Midwest Steel Products Co., 121B Railway Exchange Bldg., Kansas City 6, Mo.

FOR SALE—ONE 470-BUSHEL capacity Behlen grain drier complete with 15 hp motor and all automatic controls for natural gas, excellent condition. Blue Earth Farmers Elevator Co., Blue Earth, Minn. Phone: 340.

ANDERSON & FRENCH PRESSES
AUXILIARY EQUIPMENT FOR
SOYBEANS AND OTHER
OIL SEEDS
PITTOCK & ASSOCIATES
GLEN RIDDLE, PA

COMPLETE HAMMERMILL—ONE complete Jay Bee 26-inch, 5-W hammermill with switches and ammeter, 200 hp Crocker-Wheeler explosion and dustproof motor, 3-phase, 440 amp, 3,600 rpm, complete with Cyclone. Schoeneck Farms, Inc., Nazareth, Pa.

FOR SALE—MISSISSIPPI REGISTERED and certified Lee. Will treat, free storage, insurance till planting time. These are quality, low moisture, high germination, low mechanical injury. These factors determine yield. Bard Selden, Tunica, Miss.

SEED DIRECTORY

ARKANSAS

Burdette—Hale Seed Farms, 8,000 bu. registered Hale Ogden No. 2.

Scott—Robert L. Dorth Seed Farms, 9,500 bu. registered and certified Dorthscoy 67A, 25,000 bu. registered and certified Dorthscoy 2A, 18,000 bu. registered and certified Dorthscoy 31, 14,000 bu. blue tag certified Lee, 7,500 bu. blue tag certified Jackson.

Stuttgart—Jacob Hartz Seed Co., P. O. Box 109, registered and certified and unregistered Jackson, registered and certified and unregistered Lee, certified and unregistered Ogden, certified and unregistered Dorman.

Stuttgart—Spicer Brothers, 730 S. Grand Ave., 2,500 bu. certified Lee.

Wynne—Harlan H. Holloman, Rt. 1, 8,000 bu. blue tag certified Lee, 2,000 bu. blue tag certified Ogden.

ILLINOIS

Carthage—Huey Seed Co., 2,000 bu. each Harosoy, Hawkeye, Adams, Lincoln, and Clark, all both certified and noncertified.

Farmer City—Farmer City Grain Co., 201 West North St., certified and unregistered Clark, certified and unregistered Lincoln, certified and unregistered Adams, certified and unregistered Harosoy, certified and unregistered Hawkeye.

Ridgway—Jones Farm Store and Elevator, Phone 83R3, certified and non-certified Clark.

INDIANA

Evansville—J. A. McCarty Seed Co., 526 N. W. 4th St., certified and unregistered Clark, limited quantity of certified and unregistered Wabash, limited quantity of unregistered Perry.

Lucerne—Lester Elliott, Rt. 1, 1,000 bu. certified Harosoy.

Pendleton—Walter Stohler, Rt. 3, 1,100 bushels certified Harosoy.

IOWA

Duncombe—W. K. Powers, Rt. 1, 2,000 bu. certified Hawkeye, germination 93%.

KANSAS

Lawrence—Emil W. Heck Farms, Rt. 3, 850 bu. certified Clark.

MICHIGAN

Saginaw—P. M. Boese & Sons, 4735 East Rd., 2,000 bu. certified Chippewa, 600 bu. certified Blackhawk.

MINNESOTA

Bird Island—A. A. Ziller, 80 bu. certified Acme, 150 bu. certified Comet, 400 bu. certified Norchief, 800 bu. certified Grant, 1,000 bu. certified and registered Chippewa, 400 bu. certified Ottawa Mandarin, 200 bu. certified and registered Capitol.

Lake Crystal—Wayne Othoudt, 200 bu. certified Grant, 225 bu. registered Chippewa, 450 bu. certified Comet.

MISSISSIPPI

Ruleville—T. L. Milburn, Milburn Farm, P. O. Box 4, 5,000 bu. Mississippi certified blue tag Lee.

MISSOURI

St. Louis 24—Cypress Land Farms Co., 8129 Delmar, 1,000 bu. noncertified Lee, 2,000 bu. noncertified Ogden, 2,000 bu. noncertified Clark, 500 bu. noncertified Perry, 500 bu. noncertified Harosoy.

NEBRASKA

Elk City—Wahlgreen Seed Farms, 600 bu. certified Clark.

Hastings—Carl and Wendell Starr, Rt. 2, 3,000 bu. certified Hawkeye.

West Point—Fred A. Meyer, Rt. 4, Box 87, 200 bu. certified Harosoy.

NORTH CAROLINA

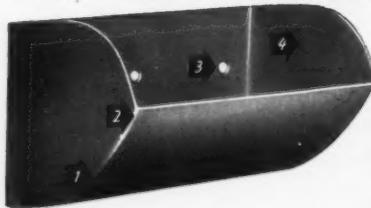
Selma—Gurley Milling Co. Seed Dept., P. O. Box 488, Ph. WO 5-2303, 5,000 bu. certified Lee, 5,000 bu. uncertified Lee, 3,000 bu. select Roanoke, 3,000 bu. certified Jackson, 3,000 bu. select Jackson, 2,000 bu. select Jew 45, 100 bu. registered Hood.

OHIO

Hilliards—Russells Co., 58 Franklin St., 6,500 bu. certified Hawkeye, 2,000 bu. uncertified Hawkeye, 2,000 bu. uncertified Harosoy, 6,000 bu. certified Harosoy, 2,000 bu. uncertified Lincoln, 2,000 bu. uncertified Clark.

Mechanicsburg—Scott Farm Seed Co., 3,000 bu. certified Lincoln.

First Choice Wherever Grain is Handled



Your jobber has them, or write B. I. Weller Company, 327 South LaSalle Street, Chicago 4, Illinois.

CALUMET
CUPS

- (1) The logarithmic curve design loads easier... dumps cleaner... permits high speeds.
- (2) Scientifically formed lip aids in greater cup capacity.
- (3) Bolt-hole placement gives better cup balance... saves bolting.
- (4) Hyperbolic sideboard ends permit greater load capacity without "stopping."



"If I were only 25 years younger . . ."

Yes, don't we all wish it. But just think of the opportunity ahead for today's young folks. The way this country's growing and booming . . . all the new things being invented . . . the new jobs opening up . . . why, I'd give anything to be just starting out again!

"And you know where I think the *real* opportunity is? Right here—on this land, on this farm.

"Now, I'll grant that farming is going to require a man to stay on his toes like he never has before. Improvements are coming to farming, just like they are to everything. And farming methods will have to improve, too, if we're to do the job ahead on land already under cultivation.

"To be a good farmer, it'll mean a man will have to keep up with changes. New ideas. Better ways of doing things. And he'll have to be an even smarter business man than he is today.

"You know, I remember my dad telling me about my future in staying with this farm. He was sure right. Things have followed the same pattern since then that they will in the future. In some ways, farming's a lot easier now than it used to be. But in

other ways, it's a much bigger challenge. That's why you just can't run a farm on any kind of "city hours". It's the *extra* time and work that enables you to make money in farming. I don't mind it, though. It's a great feeling to run your own business. And I wouldn't trade farming for any other life in the world.

"I wonder about my boy, Roy's just 12 now . . . and he lives pretty much for the present. He's got good sense, though . . . makes a lot of his own decisions already. And I think once Roy grows up and gets serious about a career, he's going to like what he sees ahead for himself right here.

"For one thing, he will already have had about ten good years of farming experience. And then, when you consider how big the population will be when Roy's grown up . . . there's going to be millions of extra mouths to feed. Industry will be wanting more and more farm crops, too.

"Yes, I'd say if a young man is really looking ahead—and he prepares himself well, both with schooling and practical experience—he'll see the future in farming is well worth being in on.

"I'm counting on a share in it myself."

As people who have worked closely with the farmer for 93 years, we at Cargill agree: the future looks bright.

Our business is Creative Processing: helping change raw farm products into things people will need and buy. This is why we're confident—with a predicted U.S. population of 220 million by 1975 (and a world population of nearly 3 billion)—Cargill Creative Processing will be wanting an ever-increasing number of crops from you, your children and *their* children.

This helps your farming business keep in step with a growing and hungry America . . . makes our position as No. 2 man on the farmer-processor team more stimulating than ever before.



93 Years of
Creative Processing
of Farm Products

CARGILL

IN THE MARKETS

MEAL PRICES. Principally as a result of the strong demand developing during 1957-58, prices of soybean meal during the past year have varied sharply from the normal seasonal pattern, USDA's Agricultural Marketing Service reports.

Soybean meal prices: Index of seasonal variation and wholesale at Decatur, by months, 1955-58

| Index of seasonal variation ¹ | Price of soybean meal per ton (Decatur, bulk) | | | | |
|--|---|-----------|-------------|---------------|-----------|
| | 1957 | | | | |
| | 1955 Pct. | 1956 Dol. | Actual Dol. | adjusted Dol. | 1958 Dol. |
| October | 94.2 | 56.00 | 45.70 | 46.60 | 50.30 |
| November | 95.2 | 49.00 | 47.40 | 45.00 | 50.85 |
| December | 97.7 | 50.25 | 46.95 | 43.90 | 52.15 |
| January | 98.2 | 51.00 | 49.90 | 43.75 | 52.45 |
| February | 94.4 | 49.40 | 46.90 | 46.90 | 50.40 |
| March | 96.1 | 47.40 | 46.75 | 54.25 | 51.30 |
| April | 98.8 | 53.00 | 45.50 | 59.50 | 52.75 |
| May | 100.8 | 60.05 | 45.40 | 55.60 | 53.85 |
| June | 104.2 | 60.75 | 44.25 | 56.75 | 55.65 |
| July | 110.0 | 54.80 | 46.60 | 68.60 | 58.75 |
| August | 109.0 | 52.10 | 52.90 | 60.25 | 58.20 |
| September | 101.4 | 46.90 | 51.00 | 59.70 | 54.15 |
| Average | 100.0 | 52.55 | 47.45 | 53.40 | 53.40 |

¹ Based on monthly average prices during 1947-57.

PRICES. Average prices for soybeans received by farmers, effective parity, and support rates, reported by Agricultural Marketing Service (dollars per bushel).

| Average farm price | Av. price as percent of parity | | | | | | |
|--------------------|--------------------------------|------|------|------|------|------|------|
| | 1959 | 1958 | 1959 | 1959 | 1958 | 1957 | 1956 |
| Jan. 15, 1959 | 2.02 | 1.97 | 2.05 | 2.90 | 70 | 2.09 | 2.09 |
| Dec. 15, 1958 | 2.15 | | | | | | |

Average farm and parity prices from crop reporting board, USDA.

PRICE SUPPORT. Quantities of 1958-crop soybeans put under support through Jan. 31, 1959, compared to 1957-crop totals through Jan. 15 and Feb. 15, 1958 (bushels)

| Ware- house- stored loans | Farm- stored loans | Total under support through Jan. 31, 1959 | Total under support through Jan. 15, 1958 | Total under support through Feb. 15, 1958 (including purchase agreements) | Total |
|------------------------------------|--------------------------|--|--|---|-------|
| 70,286,049 | 46,058,300 | 124,304,620 | 58,225,191 | 89,691,550 | |

Loan and purchase agreement figures for 1958-crop soybeans through Jan. 31, 1959, for 31 states reported (bushels)

| | Warehouse | Farm | Purchase agreements | Total quantity put under support |
|----------------|------------|------------|---------------------|----------------------------------|
| Alabama | 0 | 61,497 | 211,584 | 273,081 |
| Arkansas | 6,730,360 | 3,591,323 | 0 | 10,321,683 |
| Delaware | 0 | 3,066 | 1,200 | 4,266 |
| Florida | 0 | 203 | 0 | 203 |
| Georgia | 59,523 | 28,934 | 0 | 88,457 |
| Illinois | 14,789,062 | 6,654,184 | 3,005,534 | 24,448,780 |
| Indiana | 1,246,328 | 2,659,431 | 383,088 | 4,288,847 |
| Iowa | 20,437,676 | 14,871,799 | 1,911,183 | 37,220,658 |
| Kansas | 453,593 | 791,299 | 45,395 | 1,290,287 |
| Kentucky | 287,025 | 142,322 | 4,400 | 433,747 |
| Louisiana | 36,488 | 49,666 | 1,200 | 87,354 |
| Maryland | 0 | 1,951 | 0 | 1,951 |
| Michigan | 397,743 | 206,331 | 168,795 | 772,869 |
| Minnesota | 12,522,697 | 7,591,630 | 810,869 | 20,925,196 |
| Mississippi | 1,045,344 | 963,187 | 38,721 | 2,047,252 |
| Missouri | 5,246,119 | 4,299,428 | 478,458 | 10,024,005 |
| Nebraska | 1,007,686 | 913,586 | 140,106 | 2,061,378 |
| New Jersey | 0 | 8,731 | 1,000 | 9,731 |
| New Mexico | 20,299 | 1,624 | 0 | 21,923 |
| New York | 0 | 0 | 1,130 | 1,130 |
| North Carolina | 590 | 92,368 | 0 | 92,958 |
| North Dakota | 744,771 | 596,878 | 230,781 | 1,572,430 |
| Ohio | 2,133,767 | 1,269,175 | 286,172 | 3,689,114 |
| Oklahoma | 399,434 | 139,176 | 0 | 538,610 |
| Pennsylvania | 271 | 1,677 | 0 | 1,948 |
| South Carolina | 969,519 | 353,438 | 5,000 | 1,327,957 |
| South Dakota | 214,729 | 377,900 | 73,571 | 666,200 |
| Tennessee | 781,958 | 251,007 | 128,269 | 1,161,234 |
| Texas | 641,963 | 37,714 | 11,940 | 691,617 |
| Virginia | 78,696 | 35,557 | 4,800 | 119,053 |
| Wisconsin | 40,408 | 63,218 | 17,075 | 120,701 |
| Total bushels | 70,286,049 | 46,058,300 | 7,960,271 | 124,304,620 |

ANALYTICAL SERVICE TO THE SOYBEAN INDUSTRY SINCE 1935

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WOODSON-TENENT LABORATORIES

Official Chemists for the Chicago Board of Trade

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Specializing in Soybean Oils — Cake — Meals — Feeds

"Over 2 million samples analyzed since 1935."

SUPPLY, DISTRIBUTION of soybeans, 1952-58, reported by Agricultural Marketing Service (1,000 bu.)

| Year and quarter | Supply | | | | | | Total supply |
|---------------------|---------|---------|----------------------------------|------------|-----------------------------|--------------|--------------|
| | Farms | markets | Terminal CCC ² plants | Processing | Interior mills ³ | Total stocks | |
| 1952-57 av. | | | | | | | |
| Oct.-Dec. | 2,838 | 1,084 | 331 | 445 | 1,052 | 5,750 | 346,410 |
| Jan.-Mar. | 119,478 | 14,532 | 265 | 67,027 | 54,325 | 255,627 | 255,627 |
| Apr.-June | 77,074 | 11,267 | 170 | 46,212 | 31,847 | 166,570 | 166,570 |
| July-Sept. | 20,066 | 5,234 | 402 | 23,531 | 13,879 | 63,112 | 63,112 |
| Season..... | | | | | | 5,750 | 346,410 |
| 1957-58 | | | | | | 352,160 | |
| Oct. Dec. | 3,623 | 3,539 | 0 | 1,493 | 1,242 | 9,897 | 483,715 |
| Jan.-Mar. | 189,935 | 23,993 | 0 | 78,863 | 89,243 | 382,034 | 382,034 |
| Apr.-June | 117,445 | 17,977 | 0 | 57,983 | 62,301 | 255,706 | 255,706 |
| July-Sept. | 26,961 | 10,839 | 0 | 36,194 | 33,778 | 107,772 | 107,772 |
| Season..... | | | | | | 9,897 | 483,715 |
| 1958-59 | | | | | | 493,612 | |
| Oct. Dec. | 2,191 | 2,635 | 2,012 | 4,649 | 9,596 | 21,083 | 574,413 |
| Jan.-Mar. | 199,467 | 42,767 | 1,954 | 98,610 | 126,279 | 469,077 | 595,496 |

| Year and quarter | Distribution | | | | | | Total |
|---------------------|---------------|------------------|--------------------------|--------------------------------|-------|----------|---------|
| | Used for seed | Crushed at mills | Net exports ⁴ | Feed and residual ⁵ | Other | Ex-ports | |
| 1952-57 av. | | | | | | | |
| Oct.-Dec. | — | 69,900 | 27,273 | —640 | | | 96,533 |
| Jan.-Mar. | — | 67,728 | 11,275 | 10,054 | | | 89,057 |
| Apr.-June | 23,865 | 64,309 | 9,700 | 5,584 | | | 103,458 |
| July-Sept. | — | 57,191 | 8,754 | —9,843 | | | 56,102 |
| Season..... | 23,865 | 259,128 | 57,002 | 5,155 | | | 345,150 |
| 1957-58 | | | | | | | |
| Oct.-Dec. | — | 85,728 | 39,213 | —13,363 | | | 111,578 |
| Jan.-Mar. | — | 89,045 | 14,898 | 22,385 | | | 126,328 |
| Apr.-June | 28,236 | 92,391 | 16,854 | 10,453 | | | 147,934 |
| July-Sept. | — | 86,641 | 14,542 | —14,494 | | | 86,689 |
| Season..... | 28,236 | 353,805 | 85,507 | 4,981 | | | 472,529 |
| 1958-59 | | | | | | | |
| Oct.-Dec. | — | 101,443 | 40,842 | —15,866 | | | 126,419 |

¹ Oct. 1 stocks in all positions include only old-crop soybeans. ² Owned and stored in bins or other storage owned or controlled by CCC. Additional CCC-owned grain is included in other positions. ³ All off-farm storage not otherwise designated. ⁴ Exports minus imports which are negligible. ⁵ Mostly quantity fed, but includes waste, loss and statistical errors in estimates.

Oilseed cakes and meals: Supply and distribution, United States, year beginning October 1957 and 1958 (1,000 tons)

| Stocks Oct. 1 ¹ | Supply | | | Distribution | | | Stocks Sept. 30 |
|----------------------------|------------|---------|-------|--------------|-------------------------|----------------------|-----------------|
| | Production | Imports | Total | Feed | Other uses ² | Exports ³ | |
| 1957-58 | | | | | | | |
| Soybean | 55 | 8,284 | 1 | 8,340 | 7,962 | 30 | 300 |
| Cottonseed | 210 | 1,922 | 72 | 2,204 | 2,096 | 30 | 7 |
| Linseed | 64 | 435 | 8 | 507 | 467 | — | 14 |
| Peanut | 3 | 45 | 0 | 48 | 44 | — | 2 |
| Copra | 1 | 119 | 68 | 188 | 187 | — | 1 |
| Total | 333 | 10,805 | 149 | 11,287 | 10,756 | 60 | 323 |
| 1958-59 ³ | | | | | | | |
| Soybean | 48 | 9,200 | — | 9,248 | 8,800 | | |
| Cottonseed | 71 | 2,200 | 50 | 2,321 | 2,150 | | |
| Linseed | 26 | 475 | 5 | 506 | 475 | | |
| Peanut | 2 | 100 | — | 102 | 85 | | |
| Copra | 1 | 120 | 70 | 191 | 190 | | |
| Total | 148 | 12,095 | 125 | 12,368 | 11,700 | | |

¹ Stocks at processors' plants. ² Estimated quantities of soybean meal used for industrial purposes and cottonseed meal used for fertilizer on farms of cotton growers. ³ Based on indications in January, 1959. Agricultural Marketing Service.

INSPECTIONS. Soybeans inspected by grade and percent, reported by Agricultural Marketing Service.¹

| January 1959 ² | December 1958 | January 1958 | Oct.-Jan. 1958-59 | Oct.-Jan. 1957-58 |
|---------------------------|---------------|--------------|-------------------|-------------------|
| 1,000 bu. | 1,000 bu. | 1,000 bu. | 1,000 bu. | 1,000 bu. |
| No. 1 | 7,361 | 29 | 4,937 | 21 |
| No. 2 | 11,613 | 46 | 10,698 | 45 |
| No. 3 | 3,858 | 16 | 5,380 | 23 |
| No. 4 | 1,563 | 6 | 1,778 | 8 |
| Sample | 742 | 3 | 699 | 3 |
| Total | 25,137 | 100 | 23,492 | 100 |
| | 22,164 | 100 | 219,939 | 100 |
| | | | 198,553 | 100 |

¹ Carlot receipts have been converted to bushels on the basis that one carlot equals 1,750 bushels. ² Of the January receipts, 800 bushels were black, 1,750 green, and the remainder yellow soybeans. Inspections of soybeans in January included 5,049,652 bushels as cargo lots, 2,097,630 bushels as truck receipts, and the balance as carlot receipts. Based on reports of inspections by licensed grain inspectors at all markets.

FACTORY USE VEGETABLE OILS for November and December 1958. Reported by Bureau of the Census (1,000 lbs.)

Primary materials: Factory production and consumption, and factory and warehouse stocks, December 1958-November 1958

| Factory production De- cember 1958 | No- ember 1958 | Factory consumption De- cember 1958 | Factory and warehouse stocks | |
|---|----------------------|---|---------------------------------|------------------|
| | | | Dec. 31, 1958 | Nov. 30, 1958 |
| Cottonseed, crude | 189,981 | 205,160 | 161,294 | 152,982 |
| Cottonseed, refined | 150,155 | 142,372 | 106,697 | 119,590 |
| Soybean, crude | 359,893 | 351,240 | 326,015 | 184,117 |
| Soybean, refined | 310,939 | 294,040 | 305,428 | 130,537 |
| Vegetable fats (100% basis) | 21,588 | 19,961 | 13,118 | 16,701 |
| Hydrogenated vegetable oils— Edible: | | | | |
| Cottonseed | 23,949 | 26,347 | 21,951 | 22,715 |
| Soybean | 150,120 | 139,579 | 130,272 | 48,250 |
| Other | 4,808 | 6,653 | 5,259 | 3,203 |
| Margarine ¹ | 148,915 | 129,009 | (NA) | 38,313 |

¹ Revised. NA—Not available. ² Data for stocks exclude quantities held by consuming factories.

Factory consumption of vegetable oils, by uses, during December 1958

| Short- en- ing | Mar- ga- ring | Other | Inedible products | |
|---|---------------------|--------|-------------------|-------------|
| | | | Soap | Varnish |
| Cottonseed, refined | 11,665 | 1,250 | 3,031 | 156 |
| Soybean, crude | — | — | (²) | 268,1509 |
| Soybean, refined | 48,953 | 9,102 | 8,788 | 6,215,5,930 |
| Fats, vegetable, raw and acidulated (100% basis) | — | — | — | 2,071 |
| Hydrogenated vegetable oils, edible: | | | | |
| Cottonseed | 7,215 | 12,612 | 2,124 | — |
| Soybean | 36,276 | 91,869 | 2,113 | — |
| Other | 1,630 | 1,972 | (²) | — |

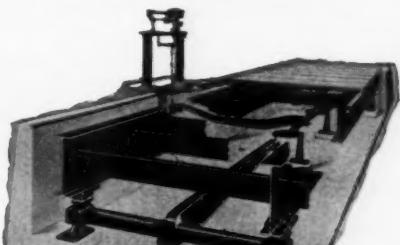
¹ Quantities consumed in linoleum and animal feeds are included in above totals. ² Not shown to avoid disclosure of figures for individual companies.

Winslow Scales with cabinet dial with weighbeam

Truck scales for bulk feed stations, grain elevators, cooperatives, and other installations requiring truck-load weighing. Weight indication: weighbeam or cabinet dial, weight printing if desired.

Floor Type Scales — Hopper Scales Manufactured to Special Size

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Two-Section Type "S" With Full Capacity Weighbeam

Heavy duty, quality equipment—accurate—wide range of capacities and platform sizes.

WINSLOW GOVERNMENT STANDARD SCALE WORKS, INC.

Haythorne & Winslow Ave. Terre Haute, Indiana

SCALE MANUFACTURERS FOR OVER 50 YEARS

Consumption of oils in fat splitting (1,000 lbs.)

| | 1958 | | | 1957 | | |
|----------------|-----------|-------|--------------------|-----------|---------------------|-----------|
| | Jan.-Nov. | Nov. | October cumulative | Jan.-Nov. | November cumulative | Jan.-Nov. |
| Vegetable fats | 7,473 | 8,193 | 24,114 | 5,442 | 89,102 | |

EXPORTS. Preliminary data on U. S. exports of soybeans and soybean oil for the month of December 1958 with comparable data for December 1957 and cumulative totals for the marketing years 1957-58 and 1958-59, reported by Foreign Agricultural Service, U. S. Department of Agriculture.

| | December | | October-December | | | |
|--------------------------------------|----------|------------|------------------|------------|------------|--|
| | Unit | 1957 | 1958 | 1957-58 | 1958-59 | |
| Soybeans | bu. | 13,719,795 | 10,196,812 | 39,212,505 | 38,038,448 | |
| Soybean oil: | lb. | 10,386,387 | 8,124,783 | 42,892,328 | 67,388,055 | |
| Crude | lb. | 16,548,806 | 4,991,362 | 23,688,804 | 10,964,932 | |
| Refined but not further processed | lb. | 20,774,926 | 57,023,725 | 31,817,929 | 88,571,370 | |
| Refined, deodorized and hydrogenated | lb. | | | | | |

Title I, P. L. 480 shipments July 1958-Jan. 1959
January 1959 July 1958-January 1959

| | Metric | | Metric | | | |
|----------------|--------|------|------------|---------|------|-------------|
| | tons | Unit | Quantity | tons | Unit | |
| Cottonseed oil | | | | 1,325 | lb. | 2,921,000 |
| Soybean oil | 22,151 | lb. | 48,834,000 | 188,351 | lb. | 415,242,000 |

Cottonseed and soybean oils: Exports under Title I Public Law 480 programs, and total exports, October 1954-December 1958 (mil. lb.)

| Type of oil | Oct. 1-Sept. 30 | | Oct. 1-Dec. 31 | | | | |
|----------------------------|-----------------|---------|----------------|---------|------|------|--|
| | 1954-55 | 1955-56 | 1956-57 | 1957-58 | 1957 | 1958 | |
| Shipments under P. L. 480: | | | | | | | |
| Cottonseed | 117 | 291 | 55 | 94 | 18 | 1 | |
| Soybean | | 279 | 495 | 609 | 16 | 157 | |
| Total oils | 117 | 570 | 550 | 703 | 34 | 158 | |
| Total shipments: | | | | | | | |
| Cottonseed | 1,710 | 1,611 | 423 | 248 | 124 | 223 | |
| Soybean | 50 | 557 | 807 | 803 | 98 | 2117 | |
| Total oils | 760 | 1,168 | 1,230 | 1,051 | 222 | 2200 | |

¹ Includes foreign donations under Section 416 Title III, Public Law 480.

² December exports estimated. Foreign Agricultural Service.

Fats and oils: U. S. exports under Title I, Public Law 480, marketing year ending Sept. 30, 1958, and Oct. 1 through Dec. 31, 1958 (mil. lb.)

| Period and country | Edible oils | | | |
|----------------------|-------------|---------|-------|--|
| | Cottonseed | Soybean | Total | |
| Oct. 1957-Sept. 1958 | | | | |
| Brazil | 6.9 | — | 6.9 | |
| China (Taiwan) | — | 10.3 | 10.3 | |
| Colombia | 4.5 | 1.7 | 6.2 | |
| Ecuador | 1.9 | 1.7 | 3.6 | |
| Iceland | .2 | .3 | .5 | |
| Israel | 4.4 | 5.9 | 10.3 | |
| Italy | — | 67.0 | 67.0 | |
| Pakistan | 13.0 | .7 | 13.7 | |
| Poland | 2.2 | 23.2 | 25.4 | |
| Spain | — | 322.9 | 322.9 | |
| Turkey | 58.3 | 92.7 | 151.0 | |
| Yugoslavia | 2.6 | 82.7 | 85.3 | |
| Total | 94.0 | 609.1 | 703.1 | |
| Oct.-Dec. 1958: | | | | |
| Ecuador | 1.4 | 1.8 | 3.2 | |
| Israel | — | 2.2 | 2.2 | |
| Italy | — | 7.8 | 7.8 | |
| Poland | — | 19.6 | 19.6 | |
| Spain | — | 120.4 | 120.4 | |
| Turkey | — | 5.0 | 5.0 | |
| Total | 1.4 | 156.8 | 158.2 | |

Foreign Agricultural Service.

Soybeans: Inspections for export by coastal areas and country of destination, January 1959 (1,000 bu.)

| Atlantic | Gulf | | | |
|----------|---------|-----------------|-----------------|--|
| | Denmark | United Kingdom | The Netherlands | |
| | 431 | 586 | 1,134 | |
| | 644 | 107 | 140 | |
| | 710 | 193 | 742 | |
| | 137 | 334 | 478 | |
| | 99 | Subtotal | 2,810 | |
| | 3,241 | Total Jan. 1959 | 5,306 | |
| | | Total Jan. 1958 | 8,547 | |

Note: Data are based on weekly reports of inspections for export by licensed inspectors and do not include rail or truck movement to Canada or Mexico. In some cases the ultimate destination of the soybeans exported is not shown in the inspection reports, therefore, the quantity of each country may vary from official Census data which are based on custom declarations.

Soybeans: Inspections for export by ports and lake shipments to Canada January 1959 (1,000 bu.)

| Atlantic | Mobile | | | |
|----------|--------------|--------------|--------------|--|
| | Philadelphia | Baltimore | Norfolk | |
| | 731 | 1,574 | 824 | |
| | Subtotal | 1,324 | | |
| | | January 1959 | January 1958 | |
| | | 8,547 | 6,543 | |
| | | 3,554 | | |

Based on weekly reports of inspections for export by licensed inspectors and does not include rail or truck movement to Canada or Mexico.

¹ Includes 112,403 bushels of soybeans shipped from Morehead City, N. C.

PROCESSING OPERATIONS. Reported by Bureau of the Census for December 1958 and January 1959.

Primary products except crude oil at crude oil mill locations: Production, shipments and transfers, and stock, January 1959-December 1958 (1,000 tons)

| Soybean: | Production | | Shipments and transfers | | Stocks end of month | |
|----------------------|---------------|--------------------|-------------------------|--------------------|---------------------|---------------|
| | Janu- 1959 | Decem- ber 1958 | Janu- 1959 | Decem- ber 1958 | Jan. 31, 1959 | Dec. 31, 1958 |
| Cake and meal | 872.6 | 818.2 | 859.7 | 844.3 | 68.2 | 55.3 |
| Millfeed (hull meal) | | | | | | |

Soybeans: Net receipts, crushings, and stocks at oil mills, by states, January 1959-December 1958 (1,000 tons)

| | Net receipts at mills ¹ | | Crushed or used | | Stocks at mills | |
|----------------|------------------------------------|--------------------|-----------------|--------------------|-----------------|---------------|
| | Janu- 1959 | Decem- ber 1958 | Janu- 1959 | Decem- ber 1958 | Jan. 31, 1959 | Dec. 31, 1958 |
| U. S. | 971.5 | 760.5 | 1,100.6 | 1,033.3 | 2,829.3 | 2,958.3 |
| Illinois | 320.6 | 217.4 | 344.4 | 321.1 | 700.6 | 724.5 |
| Indiana | 62.1 | (2) | 89.4 | 87.1 | 276.6 | 303.9 |
| Iowa | 179.2 | 106.6 | 173.1 | 156.0 | 256.4 | 250.3 |
| Kansas | (2) | (2) | (2) | (2) | (2) | (2) |
| Kentucky | (2) | (2) | (2) | (2) | (2) | (2) |
| Minnesota | 99.3 | 89.3 | 88.3 | 83.1 | 115.6 | 104.5 |
| Missouri | (2) | 19.3 | 38.1 | 36.8 | (2) | 148.4 |
| Nebraska | (2) | (2) | (2) | (2) | (2) | (2) |
| North Carolina | 5.3 | 22.6 | 6.2 | 4.6 | 62.2 | 63.2 |
| Ohio | 83.8 | 56.1 | 97.2 | 92.6 | 354.6 | 368.1 |
| Tennessee | 79.7 | 141.1 | 102.3 | 79.9 | 340.4 | 363.0 |
| All other | 141.6 | 108.1 | 161.5 | 172.0 | 722.8 | 632.6 |

¹ Net receipts for each state are derived from the quantity of beans crushed and net change in stocks.

² Included in "All other" to avoid disclosure of figures for individual companies. Note: Detail figures may not add to totals because of independent rounding.

Soybean products: Production and stocks at oil mill locations, by states, January 1959-December 1958

| | Crude oil | | Coke and meal | | |
|-------------|------------|--------|---------------|--------|-------|
| | Production | Stocks | Production | Stocks | |
| U. S. | 385.5 | 359.9 | 111.8 | 72.0 | 872.6 |
| Illinois | 123.9 | 114.4 | 21.0 | 13.9 | 267.9 |
| Indiana | 31.0 | 30.1 | (2) | (2) | 71.4 |
| Iowa | 60.4 | 54.5 | 27.5 | 17.1 | 141.4 |
| Kansas | (2) | (2) | (2) | (2) | (2) |
| Kentucky | (2) | (2) | (2) | (2) | (2) |
| Minnesota | 30.8 | 28.5 | 18.4 | 8.8 | 70.2 |
| Missouri | 13.9 | 13.3 | 2.1 | 3.0 | 30.8 |
| Nebraska | (2) | (2) | (2) | (2) | (2) |
| N. Carolina | 1.6 | 1.2 | 0.6 | 0.8 | 5.0 |
| Ohio | 32.3 | 30.8 | 5.8 | 3.9 | 78.0 |
| Tennessee | 36.0 | 28.1 | 12.6 | 6.7 | 80.3 |
| All other | 55.7 | 59.1 | 20.9 | 17.9 | 127.6 |

Note: Detail figures may not add to totals because of independent rounding. ¹ Include millfeed (hull meal). ² Included in "All other" to avoid disclosure of figures for individual companies.

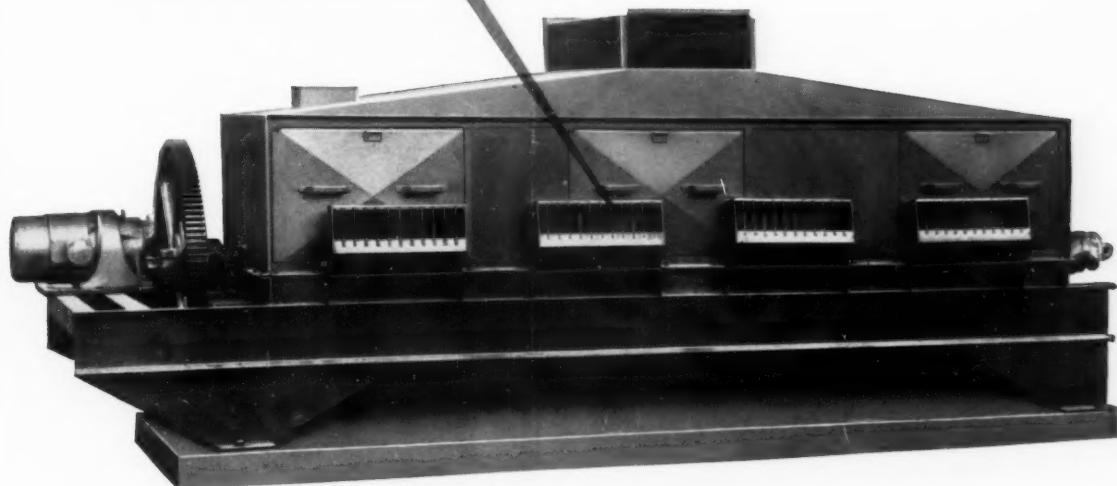
STOCKS. Agricultural Marketing Service's commercial grain stocks reports for close of business on Friday or Saturday preceding date of report (1,000 bu.)

| | Jan. 27 | Feb. 3 | Feb. 10 | Feb. 17 |
|--|---------|--------|---------|---------|
| U. S. soybeans in store and afloat at domestic markets | | | | |
| Atlantic Coast | 6,447 | 5,658 | 4,414 | 4,246 |
| Gulf Coast | 2,184 | 1,974 | 1,296 | 828 |
| Northwestern and Upper Lake | 2,794 | 2,972 | 2,623 | 2,618 |
| Lower Lake | 15,275 | 14,829 | 14,678 | 14,492 |
| East Central | 10,924 | 10,584 | 9,821 | 9,324 |
| West Central, Southwestern and Western | 3,656 | 3,641 | 3,623 | 3,523 |
| Total current week | 41,280 | 39,658 | 36,455 | 35,031 |
| Total year ago | 24,242 | 23,940 | 23,657 | 22,979 |
| U. S. soybeans in store and afloat at Canadian markets | | | | |
| Total current week | 530 | 492 | 454 | 419 |
| Total year ago | 197 | 166 | 130 | 100 |
| Total North American commercial soybean stocks | | | | |
| Current week | 41,810 | 40,150 | 36,909 | 35,450 |
| Year ago | 24,439 | 24,106 | 23,787 | 23,079 |



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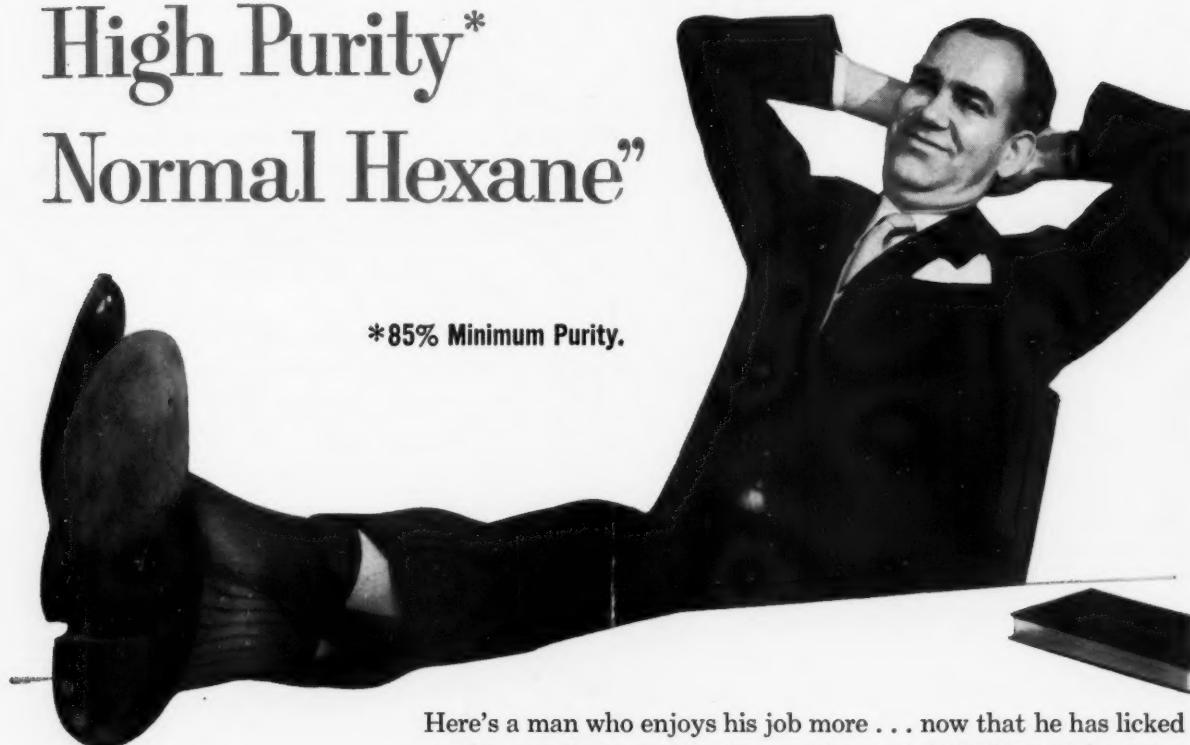
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